SIEMENS

ARCADIS

SP

Installation and Startup

System

Hardcopy Camera Info. for ARCADIS VB10C/VB11A

Valid for:
ARCADIS Varic
ARCADIS Orbic

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HCC information for Arcadis Varic/Orbic

General information

Acronyms and abbreviations

AE title	Application entity title
BU	Business unit (modality)
DCS	DICOM conformance statement
DICOM	Digital imaging and communication in medicine
HW/SW	Hardware/software
HCC	Hardcopy camera
LAN	Local area network
LUT	Look up table
OEM	Original equipment manufacturer
SCP	Service class provider
SCU	Service class user
TCP/IP	Transfer control protocol/Internet protocol

Block diagram for Arcadis Varic/Orbic and HCC

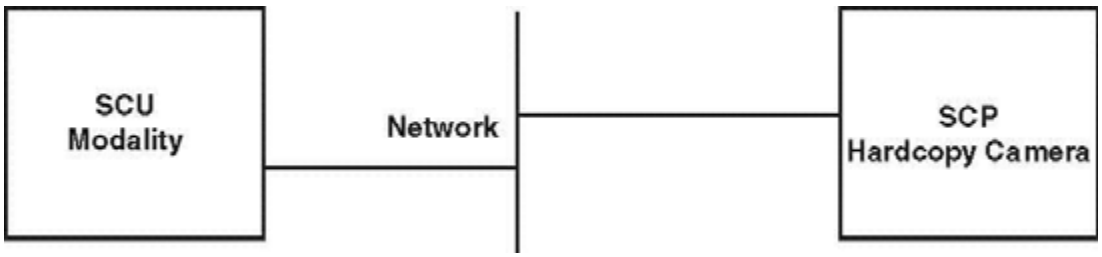

Fig. 1:

System references

- See Siemens Medical Solutions Intranet UPTIME Services
- Product-specific technical documentation

Hardware components

- Cable, straight-through, S/UTP RJ45 (5m; part no.: 30 74 515)
- Cable, straight-through, S/UTP RJ45 (30m; part no.: 30 74 523)

or

- See Siemens Medical Solutions Intranet UPTIME Services

- Product-specific technical documentation

Restrictions and known effects

NOTE	**The DICOM camera parameter for “color appearance” has to be set to “grayscale 12 bit” in the DICOM print device menu step 3. (Filming properties)**
NOTE	**Only valid for SW version VB10C:** **Import the correction LUT “xrfCorr16b-bspline.lut" from the XRFImage LUT directory to the XAImage LUT directory. (path C:\ASPIA\config\HC\Lut\XRFImage copy to XAImage)** **The “correction LUT” for the "XAImage” “image type” has to be set to “xrfCorr16b-bspline” in the platform for “LUT files".**
NOTE	**Print the SMPTE test image to check the modality and camera adjustment according to the description and compare the results to the values in the reference value table for a max. density of 3.00.**
NOTE	**Sending film sizes that are not available at the customer site may cause problems at the camera site. For this reason, it is recommended that you delete these film sizes for portrait and landscape formats.**
NOTE	**The Grayscale Standard Display Function (GSDF) is implemented for printing and imaging. (Presentation LUT)**
NOTE	**Since the monitor cannot use GSDF, the DICOM presentation LUT is not released.**
NOTE	**The use of the presentation LUT has to be disabled by local service for the configuration of LUT files.**
NOTE	**The density values for the image quality were measured using a calibrated densitometer X-Rite 301. The measurement result of the other densitometer may differ from the absolute density values indicated in the tables.**
NOTE	**The DICOM basic color print function is not released.**

Errors and warning messages

Only certain errors and warnings have been tested for each hardcopy camera.

These errors and warnings are described in the corresponding specific camera information.

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Scope of applicability

Modality/system

Device type	Modality (SCU)
Product name	ARCADIS Varic/Orbic
HW revision	Fujitsu Siemens PC, Celsius M410
Manufacturer	Siemens Medical Solutions
SW revision	VB10B (syngo-based VX46A)
Conformance statement	Syngo VD20J, D.C.S., May 23, 2003

Hardcopy cameras

This table includes all hardcopy cameras using DICOM basic print.

Manufacturer	HCC name	Software validity			
		VB10C	VB11A	V....	V....
AGFA	Drystar 5500	X	X		
AGFA	Drystar 5300	N/A	N/A		
AGFA	Drystar 4500	N/A	N/A		
AGFA	Drystar 4500M	N/A	N/A		
AGFA	Drystar 3000	X	X		
AGFA	LR5200 / MG 3000	X	X		
AGFA	LR3300 / MG 3000	N/A	N/A		
AGFA	iiLinx Contact 400	N/A	N/A		
AGFA	SolidInkJet 400 / DPS	N/A	N/A		
AGFA	LP400/300 with image gateway	N/A	N/A		
CODONICS	Horizon	X	X		
CODONICS	NP 1660MD (DICOM)	N/A	N/A		
FUJI	Drypix 7000	X	X		

Manufac-turer	HCC name	Software validity			
		VB10C	VB11A	V....	V....
FUJI	Drypix 3000	X	X		
FUJI	Drypix 1000	X	X		
FUJI	FM DPL / FN-PS 551	X	X		
FUJI	FM DP3543 / FN-PS 551	N/A	N/A		
FUJI	FL IMD / FN-PS 551	N/A	N/A		
KODAK	DryView 8900	X	X		
KODAK	DryView 8700-Plus / PACS Link MIM 200	X	X		
KODAK	DryView 8700-Dual / PACS Link 9410 MIM 8800	N/A	N/A		
KODAK	DryView 8610 / PACS Link MIM 200	N/A	N/A		
KODAK	DryView 8300 / PACS Link MIM 200	N/A	N/A		
KODAK	DryView 8200 / PACS Link MIM 200	X	X		
KODAK	DryView 8100 / PACS Link MIM 200	X	X		
KODAK	KELI 160/ PACS Link MIM 200	N/A	N/A		
KODAK	KELP 2180 / PACS Link MIM 200	X	X		
KODAK	KELP 1120 / PACS Link MIM 200	N/A	N/A		
KODAK	MLP 190	N/A	N/A		
KONICA	LI 21 / Print Link	N/A	N/A		
KONICA	LI 2001	N/A	N/A		
KONICA	DryPro 751 / 752	X	N/A		
KONICA	DryPro 722 / Print Link	N/A	N/A		

X = Hardcopy camera is released

n.a. = Hardcopy camera is not released

NOTE **The use of non-released combinations of hardcopy cameras and BU products is prohibited and does not meet the specified requirements.**

DICOM associations

A DICOM association is a network connection between 2 DICOM applications. The association is established and released by the SCU and may be aborted by the SCU or SCP. The maximum number of associations for each HCC device is defined in the DCS. The maximum number of associations depends on the configuration and may be expanded by increasing the number of gateways connected to the printer device.

In a DICOM network environment, there are two possibilities for connecting a modality (SCU) to an HCC device (SCP).

Case 1: The association is always opened. Assuming that this behavior applies to all modalities (connected to the same HCC device), the number of modalities has to be equal to or less than the maximum number of supported associations.

Case 2: The association is opened (and closed) on demand. Assuming that this behavior applies to all modalities (connected to the same HCC device), the number of modalities may be greater than the maximum number of supported associations. This number is shared by the modalities.

For each SIEMENS modality, the association open-close behavior is fixed. For other non-SIEMENS modalities, this behavior is unknown. Under optimal circumstances, the number of modalities is equal to or less than the maximum number of supported associations.

The association is always opened by SCU (case 1)

If the associations are always opened by the SCU for each configured HCC device, the association is reserved for this SCU only.

If the maximum number of associations = 1 and another modality never releases the association, this HCC device is always reserved for this modality.

The association is opened and closed on demand (case 2)

The associations are opened (and closed) by SCU on demand for each configured HCC device with a product name.

Special cases (compare also to case 1):

If the number of modalities configured in the HCC device is greater than the maximum number of supported associations, printing will not function for some modalities. The printing function depends on the access time and the release mechanism of each connected modality (e.g., the maximum number of supported associations = 1, the number of modalities = 2. During the access time of the first modality, access of the second modality is denied and connectivity fails and vice versa).

If other modalities do not release the associations, the shareable number of associations decreases.

Modality

Hardware and software prerequisites

All hardware and software prerequisites are included with the <modality> product delivery volume.

Parameters

For software configuration, HCC data/parameters and possible additional film matrix properties (syngo: filming properties) are required.

Modality data and configuration parameters

Properties	Example	Supplier
Port number	104	Default entry
AE title	PR_"Hostname"	Default entry
TCP/IP address	xxx.x.x.xxx	Network administrator

HCC data and configuration parameters[1]

1 The values of these parameters are part of the specific HCC information

Example: Kodak DryView 8300

Application entity Properties	Display	Supplier
AE title	K8300	Network administrator or HCC service
Port number	5040	HCC service

HC device / General settings		Display	Supplier
Type		DICOM printer	Default entry
Class (printer spec. file name)		kodak8300	Default entry
DICOM node		dv8300	Default entry

Filming properties		Display	Supplier
Hold printed film jobs		10	Default entry
Min. density		20	Default entry
Pixel size [1/1000 mm]		85.0 x 85.0	Default entry

Filming properties		Display	Supplier
Film sheet formats, Portrait	Number of pixels [columns x rows]	8"x10" 2256x2676	Default entry
Film sheet formats, Landscape	Number of pixels [columns x rows]	8"x10" 2736x2136	Default entry
Medium type		Blue film	Default entry
Film destination		Processor	Default entry
Color appearance		Grayscale 12 bit	Default entry
Background		Black	Default entry
Transformation		No magnification	Default entry

Film matrix properties

The settings for filming properties depend on the class selected (DICOM camera). A pull-down menu for DICOM-class cameras is provided. Select your DICOM camera type. A specific file for this type is loaded and the "filming properties" are shown. Changing the "filming properties" will affect the camera site and may not meet the requirements. Do not change anything, unless instructed otherwise.

NOTE **Filming properties are "pixel size" and "media sheet size"; this data is required for image scaling and cannot be changed.**

Software configuration

- The following information is required:
  - Host name
  - TCP/IP address
  - Application entity title
  - Port number of the DICOM remote host (DICOM laser camera)

The AE title, port number and camera type have to be provided by the local camera service.

Syngo software configuration and laser camera

1. Select options in the menu line
2. Click on local service
   ➪ The Siemens service software authentication platform appears
3. Enter the password and click ”OK”
   ➪ The syngo service software home menu platform appears
4. Click ”configuration”
   ➪ The local service configuration list of system options appears

5. Click DICOM ”general”
6. Click ”>”
   ➪ The local application entity title platform appears
7. Provide the local camera service with the information in the field ”Print (SCU) AE Title PR_”Hostname”
8. Click ”save”; ”>”; ”finish”
   ➪ The configuration setup platform appears
9. Click local host ”TCP/IP LAN”
   ➪ The local service configuration TCP/IP LAN platform appears
10. Provide the local camera service with the information in the ”IP address” field (scroll down the menu for IP address but do not select it)
11. Click ”finish”
    ➪ The configuration setup platform appears
12. Select DICOM print devices
    ➪ The local service hardcopy device platform appears
13. Enter the host name and TCP/IP address of the laser camera (provided by the camera manufacturer)
14. Click ”test” for testing IP communication (ping)
15. Click ”save”
    ➪ Host properties successfully saved
16. Click ”OK”
17. Click ”>”
    ➪ The general note properties dialog platform appears
18. Under logical name: Enter the logical name of the laser camera
19. Select the host and choose the previously defined host name in the hardcopy device platform
20. Under application entity properties: Enter the AE title in the edit AE title field (provided by the camera manufacturer)
21. Enter the port number (provided by the camera manufacturer)
22. Click ”add”
23. Click ”save”
    ➪ DICOM node properties successfully saved
24. Click ”OK”
25. Select the logical name again and click ”verification” to test the DICOM communication (mc3echo)
26. Click ">"
    ➪ The camera-specific parameters platform appears
27. HC device: Enter the camera name
28. General settings: /Type: DICOM printer

29. /Class: e.g., agfadrystar3000 or see specific HCC information
30. Filming properties:
    - Hold printed film job 10 = default; (max =10) (films can be printed again)
    - Min. density 20 = default; (can be changed by steps of 0.1)
    - Pixel size (changes not allowed)
    - Portrait film sheet format (do not modify and/or add film sizes; select and delete film sizes that are not available at the customer site)
    - Medium type blue film = default; clear film; paper
    - Film destination processor = default; magazine
    - Color appearance monochrome =default; (select color for printers that support and use color media only, e.g., Drystar2000; Codonics)
    - Background black =default; white
    - Transformation no magnification = default; do not change this value; except for Kodak XL 959; replicate; bilinear; cubic; (do not change any other values under filming properties)
31. Click on "save"
    ➪ Caution: Please wait for the message "device properties successfully saved"
32. Click ”OK”
33. Click ”finish”
    ➪ The configuration setup platform appears
34. Skip by clicking ”>” and select the next marked DICOM ”HC overview”
35. Click ”finish”
    ➪ The configuration setup platform appears
36. Click LUT files
    ➪ The LUT platform appears.

NOTE

If new LUT files for one or more modalities are available on a removable medium, e.g., floppy or CD, these files can be selected on the source drive and copied to the dependent LUT directories on the local host. Unnecessary LUT files can be removed from LUT directories on the local host.

37. Click ">"
    ➪ Usage of presentation LUT platform appears
38. Select disable
39. Modifications are necessary for additional image impressions only.

NOTE

Only BU image and SC image are relevant. Depending on the camera, specific entries have to be made. If nothing else is mentioned, set the BU image and SC image to "BULUT" and "3.00" for maximum density. The entries for BU image and SC image must be identical.

40. Overall maximum density:
    - 3.00 = default (depends on the max. possible value of the max. density of all image types)
41. Interpolation for printing:
    - Bilinear mode = default; #Smoothing Type
    - Replicate #Smoothing Type
    - Cubic 0, 2, 3, 4 = concerns cubic mode only
42. When changes are made, click "save"
43. Click on "finish"
44. Click "home"; the system automatically restarts the application

NOTE	**This may take some time. Confirm the warning messages with "OK."**

Image quality and optical density check

General image quality information (LUT)

Only the standard LUT files are loaded. For importing/removing additional/unnecessary LUT files (see the ”Additional/unnecessary LUT files” section).

The image data from the modality to the HCC is transformed/corrected by the LUTs, once in the modality and once in the HCC. As a result, the LUT must be set on both sides:

- See Siemens Medical Solutions Intranet UPTIME Services
- Product-specific technical documentation

Required LUT settings

Modality	Image type	Correction LUT	Max. density
ARCADIS system	XAImage	XaCorr16b-bspline	3.00
	SCImage	XaCorr16b-bspline	3.00
HCC	See "DICOM printer settings" in the specific camera information. Settings are made by the HCC service; **"LINEAR LUT"**		

Density verification

There are two possibilities for checking the LUT via the film density:

The modality is configured to a specific correction LUT and the HCC is configured to linear curves, or the modality is configured to linear LUT and the HCC is configured to linear curves.

Density verification

Check no.	Verification for	Modality adjustment			Reference value
	ARCADIS system	Image type	LUT	Max. density	
1	Desired density	XAImage	XaCorr16b-bspline	3.00	See the table for XaCorr16b-bspline
2	HCC linearity	XAImage	Linear	3.00	See table for linear LUT

These two checks are equivalent; checking the “specified density” is sufficient.

Checking “HCC linearity” may be necessary if the desired density verification (1) shows deviations and the HCC setting needs to be changed.

NOTE

Even if the HCC service does not require a test image of the modality for the HCC setting, it is easier to check this setting - and possibly further HCC corrections - with the HCC linearity verification (2) than with the desired density verification (1). Only the HCC linearity LUT is effective. A graphical display would only show the current HCC behavior, which could be helpful for the HCC service.

Density values

- Measure the density values in 11 gray levels in the SMPTE test image (Fig. 2 / p. 17) (for each film size).

  W:100; C:0;

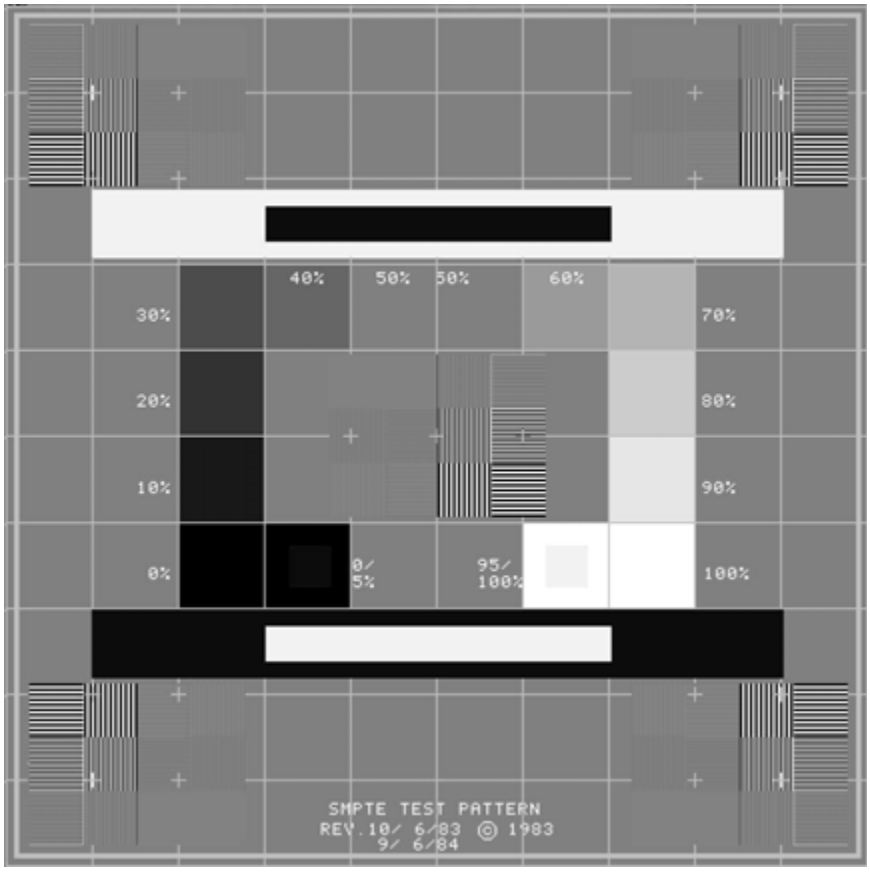

Fig. 2: SMPTE_1k_.....BMP

Tab. 1 Reference value for max. density 3.00

Step	XaCorr16b-bspline (LUT)			Linear LUT		
	Ref. LUT	Maximum density	Minimum density	Ref. LUT	Maximum density	Minimum density
1	0.20	0.23	0.17	0.20	0.23	0.17
2	0.31	0.35	0.27	0.47	0.51	0.44
3	0.42	0.47	0.37	0.76	0.80	0.72
4	0.56	0.62	0.50	1.03	1.09	0.98
5	0.73	0.79	0.67	1.32	1.38	1.26
6	0.93	1.00	0.86	1.59	1.66	1.53
7	1.15	1.23	1.07	1.88	1.95	1.81
8	1.43	1.51	1.35	2.17	2.24	2.09
9	1.82	1.91	1.73	2.45	2.54	2.36
10	2.30	2.40	2.20	2.73	2.82	2.63
11	3.00	3.10	2.90	3.00	3.10	2.90
	Modality is configured to XaCorr16b-spline - LUT, Printer is configured to linear LUT.			Modality is configured to linear - LUT. Printer is configured to linear LUT.		

Refer to Arcadis Varic. Perform the image quality quick test and log the density values measured in the field of 0%, 40%, and 100% for positive and negative image presentation.

Reference film

Reference films

To verify the required image quality, create a reference film and compare the measured density values of the film with the density values in the table above.

Refer to

- Siemens Medical Solutions Intranet UPTIME Services
- Product-specific technical documentation

or follow the short description below.

Reference film with technical images

Verify the **desired** LUT adjustment, please follow this procedure:

Prerequisite configuration for desired LUT adjustment (default setting)

Modality	Image type	Correction LUT	Max. density
ARCADIS system	XAImage	XaCorr16b-bspline	3.00
HCC	See "DICOM printer settings" in the specific camera information. Settings are made by the HCC service; **"LINEAR LUT"**		

Required configuration for linear LUT adjustment

Modality	Image type	Correction LUT	Max. density
ARCADIS system	XAImage	Linear or nothing selected	3.00
HCC	See "DICOM printer settings" in the specific camera information. Settings are made by the HCC service; **"LINEAR LUT"**		

1. The layout is configurable under option/configuration/filming layout
2. Use format 1.1; default center/width; for the film sheet
3. The service test images (test patient) must be downloaded. Open and log onto syngo service. When this is done, the test patient becomes visible in the browser.

   Use test images (technical images) without text and the two medical test images with text and print the film sheet. (the DICOM command to printer is always "Bilinear - magnification "); Trim = on.
4. Print the reference film with the following test images:

   SMPTE-Testimage1 IMA1 / EDGE enhancement = 0%,
5. Measure SMPTE test image 1(Fig. 2 / p. 17) and verify the XaCorr16b-bspline - LUT using the "density values " table

   Segment layout:

1

Segment	Image	Window	Center
1	(ASPIA) SMPTE-Testimage1 IMA1 / E=0%,	1024	1024

6. Repeat this procedure with the **linear** LUT setting
7. If the test images are not available, load the test images from the “Test images” ARCADIS CD.

Description of correction LUT files

Description of correction LUT files

Correction LUT for XA image	LUT files with $D_{min.}$ 0.2 and $D_{max.}$ 3.00
Nothing selected	Linear LUT
Linear	Linear LUT
xa	Standard LUT; default for all cameras
xrfCorr16b-bspline	Standard LUT for XA images; increased pixel depth, improved gray value resolution and homogeneity

Additional and unnecessary LUT files

If new released LUT files are available on a removable medium (e.g., floppy or CD), these files may be selected on the source drive and copied to the dependent LUT directories on the local system. Unnecessary LUT files may be removed from the LUT directories on the local system.

Importing LUT files

1. In the local service configuration platform, select LUT files
2. Select the (source) drive and the path where the appropriate LUT (xaConfig16b-bspline.lut") files are located (path C:\ASPIA\config\HC\Lut\XAImage)
3. Select the destination LUT directory (correction LUT directory) which depends on the image type (XAImage).
4. Pushing the copy button transfers the selected LUT file to CTImage type.
5. Repeat this procedure using the appropriate LUT files for **SC images.**
6. Select the destination LUT directory (correction LUT directory) which depends on the image type (SCImage).
7. Pushing the copy button transfers the selected LUT file to SCImage type.
8. Confirm the message "files successfully copied" by clicking "OK"

Removing LUT files

Unnecessary LUT files can be removed from LUT directories on the local host by selecting the appropriate LUT file and clicking the 'remove' button.

- Click ">"

Real size scaling

n.a.

Real size scaling verification

n.a.

Error and warning messages

General about error and warning messages

If the association is not available, is broken, or the network is not available, the user shall be informed and corrective actions shall be performed as necessary.

The following tables document the behaviors of the DICOM print AE in response to messages received for the printer SOP class and the print job class.

Message regarding film job status and error handling

Definitions of camera symbols

Idle or running: Camera symbol
Camera is installed and ready; idle icon is displayed.

Interact: Camera symbol is marked with a cross and with !
The user must react soon but not immediately. Example: A camera was low on 8x10 clear sheets: LOW 8x10 CLR was sent by n-event-report.

Film job has failed or queue stopped: Camera symbol with a cross and X
The user must react immediately. Either the camera needs immediate attention or a job has been aborted. Example: A camera is out of 8x10 clear sheets, the camera is down, or a film job has been aborted.

Different camera symbols are displayed according to the printer status info.

Message string visible in the status bar	Description	Other action for syngo/camera symbol
Connection to camera is not available	Camera is not connected/network is not available	The icon for printing is marked with a cross.The queue is stopped

Common status information

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
NORMAL	Camera is ready.	Camera is ready.	<None>/idle
BAD RECEIVE MGZ	There is a problem with the film receive magazine. Films from the printer cannot be transported into the magazine.	Problem with receive magazine.	<None>/interact
BAD SUPPLY MGZ	There is a problem with a film supply magazine. Films from this magazine cannot be transported into the printer.	Problem with supply magazine.	<None>/interact
CALIBRATING	Printer is performing self-calibration. It is expected to be available for normal operation shortly.	Self-calibration. Please wait.	<None>/idle
CALIBRATION ERR	An error in the printer calibration has been detected. The quality of processed films may not be optimal.	Calibration problem. Film quality may not be optimal.	<None>/interact
CHECK CHEMICALS	A problem with the processor chemicals has been detected. The quality of processed films may not be optimal.	Chemistry problem. Film quality may not be optimal.	<None>/interact
CHECK SORTER	There is an error in the film sorter	Error in film sorter.	<None>/interact
CHEMICALS EMPTY	There are no processing chemicals in the processor. Films will not be printed and processed until the processor has been attended to.	Camera chemistry empty. Please check.	<None>/interact
CHEMICALS LOW	The chemical level in the processor is low. If this is not corrected, the processor will probably shut down soon.	Camera chemistry low. Please check.	<None>/interact
COVER OPEN	One or more printer or processor covers, drawers, doors are open.	Camera cover, drawer or door open.	<None>/interact

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
ELEC CONFIG ERR	Printer configured improperly for this job.	Camera configured improperly for this job. Queue stopped.	Queue for this camera will be STOPPED/queue stopped
ELEC DOWN	Printer is not operating due to some unspecified electrical hardware problem.	Camera electrical hardware problem.	<None>/interact
ELEC SW ERROR	Printer not operating due to some unspecified software error.	Camera software problem. Queue stopped.	Queue for this camera will be STOPPED/queue stopped
EMPTY 8x10	The 8x10 inch film supply magazine is empty.	8x10 film supply empty.	<None>/interact
EMPTY 8x10 BLUE	The 8x10 inch blue film supply magazine is empty.	8x10 blue film supply empty.	<None>/interact
EMPTY 8x10 CLR	The 8x10 inch clear film supply magazine is empty.	8x10 clear film supply empty.	<None>/interact
EMPTY 8x10 PAPR	The 8x10 inch paper supply magazine is empty.	8x10 paper supply empty.	<None>/interact
EMPTY 10x12	The 10x12 inch film supply magazine is empty.	10x12 film supply empty.	<None>/interact
EMPTY 10x12 BLUE	The 10x12 inch blue film supply magazine is empty.	10x12 blue film supply empty.	<None>/interact
EMPTY 10x12 CLR	10x12 clear film supply empty.	The 10x12 inch clear film supply magazine is empty.	<None>/interact
EMPTY 10x12 PAPR	The 10x12 inch paper supply magazine is empty.	10x12 paper supply empty.	<None>/interact
The 10x14 inch film supply magazine is empty.	EMPTY 10x14	10x14 film supply empty	<None>/interact
EMPTY 10x14 BLUE	The 10x14 inch blue film supply magazine is empty.	10x14 blue film supply empty.	<None>/interact
EMPTY 10x14 CLR	The 10x14 inch clear film supply magazine is empty.	10x14 clear film supply empty.	<None>/interact
EMPTY 10x14 PAPR	The 10x14 inch paper supply magazine is empty.	10x14 paper supply empty.	<None>/interact

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
EMPTY 11x14	The 11x14 inch film supply magazine is empty.	11x14 film supply empty.	<None>/interact
EMPTY 11x14 BLUE	The 11x14 inch blue film supply magazine is empty.	11x14 blue film supply empty.	<None>/interact
EMPTY 11x14 CLR	The 11x14 inch clear film supply magazine is empty.	11x14 clear film supply empty.	<None>/interact
EMPTY 11x14 PAPR	The 11x14 inch paper supply magazine is empty.	11x14 paper supply empty	<None>/interact
EMPTY 14x14	The 14x14 inch film supply magazine is empty.	14x14 film supply empty.	<None>/interact
EMPTY 14x14 BLUE	The 14x14 inch blue film supply magazine is empty.	14x14 blue film supply empty.	<None>/interact
EMPTY 14x14 CLR	The 14x14 inch clear film supply magazine is empty.	14x14 clear film supply empty.	<None>/interact
EMPTY 14x14 PAPR	The 14x14 inch paper supply magazine is empty.	14x14 paper supply empty.	<None>/interact
EMPTY 14x17	The 14x17 inch film supply magazine is empty	14x17 film supply empty.	<None>/interact
EMPTY 14x17 BLUE	The 14x17 inch blue film supply magazine is empty.	14x17 blue film supply empty.	<None>/interact
EMPTY 14x17 CLR	The 14x17 inch clear film supply magazine is empty.	14x17 clear film supply empty.	<None>/interact
EMPTY 14x17 PAPR	The 14x17 inch paper supply magazine is empty.	14x17 paper supply empty.	<None>/interact
EMPTY 24x24	The 24x24 inch film supply magazine is empty.	24x24 film supply empty.	<None>/interact
EMPTY 24x24 BLUE	The 24x24 inch blue film supply magazine is empty.	24x24 blue film supply empty.	<None>/interact
EMPTY 24x24 CLR	The 24x24 inch clear film supply magazine is empty.	24x24 clear film supply empty.	<None>/interact
EMPTY 24x24 PAPR	The 24x24 inch paper supply magazine is empty.	24x24 paper supply empty.	<None>/interact
EMPTY 24x30	The 24x30 inch film supply magazine is empty.	24x30 film supply empty.	<None>/interact
EMPTY 24x30 BLUE	The 24x30 inch blue film supply magazine is empty.	24x30 blue film supply empty.	<None>/interact

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
EMPTY 24x30 CLR	The 24x30 inch clear film supply magazine is empty.	24x30 clear film supply empty.	<None>/interact
EMPTY 24x30 PAPR	The 24x30 inch paper supply magazine is empty.	24x30 paper supply empty.	<None>/interact
EMPTY A4 PAPR	The A4 paper supply magazine is empty.	A4 paper supply empty.	<None>/interact
EMPTY A4 TRANS	The A4 transparency supply magazine is empty.	A4 transparency supply empty.	<None>/interact
EXPOSURE FAILURE	The exposure device has failed for some unspecified reason.	Exposure device has failed.	<None>/interact
FILM JAM	A film transport error has occurred and a film is jammed in the printer or processor.	Film jam.	<None>/interact
FILM TRANSP ERR	There is a malfunction with the film transport. There may or may not be a film jam.	Film transport problem.	<None>/interact
FINISHER EMPTY	The finisher is empty.	Finisher is empty.	<None>/interact
FINISHER ERROR	The finisher is not operating for some unspecified reason.	Finisher problem.	<None>/interact
FINISHER LOW	The finisher is low on supplies	Finisher low.	<None>/interact
LOW 8x10	The 8x10 inch film supply magazine is low.	8x10 film supply low.	<None>/interact
LOW 8x10 BLUE	The 8x10 inch blue film supply magazine is low.	8x10 blue film supply low.	<None>/interact
LOW 8x10 CLR	The 8x10 inch clear film supply magazine is low.	8x10 clear film supply low.	<None>/interact
LOW 8x10 PAPR	The 8x10 inch paper supply magazine is low.	8x10 paper supply low.	<None>/interact
LOW 10x12	The 10x12 inch film supply magazine is low.	10x12 film supply low.	<None>/interact
LOW 10x12 BLUE	The 10x12 inch blue film supply magazine is low.	10x12 blue film supply low.	<None>/interact

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
LOW 10x12 CLR	The 10x12 inch clear film supply magazine is low.	10x12 clear film supply low.	<None>/interact
LOW 10x12 PAPR	The 10x12 inch paper supply magazine is low.	10x12 paper supply low.	<None>/interact
LOW 10x14	The 10x14 inch film supply magazine is low.	10x14 film supply low.	<None>/interact
LOW 10x14 BLUE	The 10x14 inch blue film supply magazine is low.	10x14 blue film supply low.	<None>/interact
LOW 10x14 CLR	The 10x14 inch clear film supply magazine is low.	10x14 clear film supply low.	<None>/interact
LOW 11x14	The 11x14 inch film supply magazine is low.	11x14 film supply low.	<None>/interact
LOW 10x14 PAPR	The 10x14 inch paper supply magazine is low.	10x14 paper supply low.	<None>/interact
LOW 11x14 BLUE	The 11x14 inch blue film supply magazine is low.	11x14 blue film supply low.	<None>/interact
LOW 11x14 CLR	The 11x14 inch clear film supply magazine is low.	11x14 clear film supply low.	<None>/interact
LOW 11x14 PAPR	The 11x14 inch paper supply magazine is low.	11x14 paper supply low.	<None>/interact
LOW 14x14	The 14x14 inch film supply magazine is low.	14x14 film supply low.	<None>/interact
LOW 14x14 BLUE	The 14x14 inch blue film supply magazine is low.	14x14 blue film supply low.	<None>/interact
LOW 14x14 CLR	The 14x14 inch clear film supply magazine is low.	14x14 clear film supply low.	<None>/interact
LOW 14x14 PAPR	The 14x14 inch paper supply magazine is low.	14x14 paper supply low.	<None>/interact
LOW 14x17	The 14x17 inch film supply magazine is low.	14x17 film supply low.	<None>/interact
LOW 14x17 BLUE	The 14x17 inch blue film supply magazine is low.	14x17 blue film supply low.	<None>/interact
LOW 14x17 CLR	The 14x17 inch clear film supply magazine is low.	14x17 clear film supply low.	<None>/interact
LOW 14x17 PAPR	The 14x17 inch paper supply magazine is low.	14x17 paper supply low.	<None>/interact

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
LOW 24x24	The 24x24 inch film supply magazine is low.	24x24 film supply low.	<None>/interact
LOW 24x24 BLUE	The 24x24 inch blue film supply magazine is low.	24x24 blue film supply low.	<None>/interact
LOW 24x24 CLR	The 24x24 inch clear film supply magazine is low.	24x24 clear film supply low.	<None>/interact
LOW 24x24 PAPR	The 24x24 inch paper supply magazine is low.	24x24 paper supply low.	<None>/interact
LOW 24x30	The 24x30 inch film supply magazine is low.	24x30 film supply low.	<None>/interact
LOW 24x30 BLUE	The 24x30 inch blue film supply magazine is low.	24x30 blue film supply low.	<None>/interact
LOW 24x30 CLR	The 24x30 inch clear film supply magazine is low.	24x30 clear film supply low.	<None>/interact
LOW 24x30 PAPR	The 24x30 inch paper supply magazine is low.	24x30 paper supply low.	<None>/interact
LOW A4 PAPR	The A4 paper supply magazine is low.	A4 paper supply low.	<None>/interact
LOW A4 TRANS	The A4 transparency supply magazine is low.	A4 transparency supply low.	<None>/interact
NO RECEIVE MGZ	The film receive magazine not available.	Film receiver not available.	<None>/interact
NO RIBBON	The ribbon cartridge needs to be replaced.	Replace ribbon cartridge.	<None>/interact
NO SUPPLY MGZ	The film supply magazine specified for this job is not available.	Film supply not available.	<None>/interact
CHECK PRINTER	The printer is not ready at this time, operator intervention is required to make the printer available.	Check camera.	<None>/interact
CHECK PROC	The processor is not ready at this time, operator intervention is required to make the printer available.	Check processor.	<None>/interact
PRINTER DOWN	The printer is not operating for some unspecified reason.	Camera down.	<None>/interact

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
PRINTER INIT	The printer is not ready at this time but is expected to become available without intervention. For example, it may be in a normal warm-up state.	Camera initializing.	<None>/idle
PRINTER OFFLINE	The printer has been disabled by an operator or service person.	Camera offline.	<None>/interact
PROC DOWN	The processor is not operating for some unspecified reason.	Processor down.	<None>/interact
PROC INIT	The processor is not ready at this time but is expected to become available without intervention. For example, it may be in a normal warm-up state.	Processor initializing.	<None>/idle
PROC OVERFLOW FL	Processor chemicals are approaching the overflow full mark.	Processor chemicals overflow.	<None>/interact
PROC OVERFLOW HI	Processor chemicals have reached the overflow full mark.	Processor chemicals near overflow.	<None>/interact
QUEUED	Print job in queue	-	<None>/idle
RECEIVER FULL	The film receive magazine is full.	Receiver full.	<None>/interact
REQ MED NOT INST	The requested film, paper, or other media supply magazine is not installed in the printer but may be available with operator intervention.	Install media supply.	<None>/interact
REQ MED NOT AVAI	The requested film, paper, or other media requested is not available on this printer.	Media supply not available on this camera. Queue stopped. Change camera.	Queue for this camera will be STOPPED/queue stopped
RIBBON ERROR	There is an unspecified problem with the print ribbon.	Error with print ribbon.	<None>/interact

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
SUPPLY EMPTY	The printer is out of film.	Camera out of film.	<None>/interact
SUPPLY LOW	The film supply is low.	Film supply low.	<None>/interact
UNKNOWN	There is an unspecified problem.	Unspecified problem with camera.	<None>/interact

Additional status information - AGFA printers

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
WARMING UP	Printer is in the warm-up stage. Spooling of print jobs to disk is still possible.	Camera is warming up	<None>/idle
OFFLINE	OFFLINE printer is switched offline. Spooling of print jobs to disk is still possible.	Camera is switched offline	<None>/interact
NONE	General printer warning - no specific information available. Spooling of print jobs to disk is still possible.	--	<None>/idle

Additional status information - Kodak PACS Link (formerly Imation)

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
SUPPLY MGZ ERR	There is an error with the supply magazine.	Error with film supply.	<None>/interact

Additional status information - Kodak 2180/1120

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
PRINTER NOT RDY	Printer not ready.	Camera not ready.	<None>/interact
CHECK PROCESSOR	Check processor.	Check processor.	<None>/interact
NO TONER	No toner.	No toner.	<None>/interact
FATAL	Fatal error.	Fatal error. Queue stopped.	Queue for this camera will be STOPPED/queue stopped

Additional status information - Codonics

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
STANDARD	Printer is ready.	Camera is ready.	<None>/Normal
LOAD A-SIZE	Load A-size media.	Load A-size media.	<None>/interact
LOAD A-DVPAPER	Load A-size black and white paper.	Load A-size black and white paper.	<None>/interact
LOAD A-CVPAPER	Load A-size color paper.	Load A-size color paper.	<None>/interact
LOAD A-CVTRANS	Load A-size transparencies.	Load A-size transparencies.	<None>/interact
LOAD A4-SIZE	Load A4-size media.	Load A4-size media.	<None>/interact
LOAD A4-DVPAPER	Load A4-size black and white paper.	Load A4-size black and white paper.	<None>/interact
LOAD A4-CVPAPER	Load A4-size color paper.	Load A4-size color paper.	<None>/interact
LOAD A4-CVTRANS	Load A4-size transparencies.	Load A4-size transparencies.	<None>/interact
LOAD LA-SIZE	Load LA-size media.	Load LA-size media.	<None>/interact

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
LOAD LA-DVPAPER	Load LA-size black and white paper.	Load LA-size black and white paper.	<None>/interact
LOAD LA-CVPAPER	Load LA-size color paper.	Load LA-size color paper.	<None>/interact
LOAD LA-CVTRANS	Load LA-size transparencies.	Load LA-size transparencies.	<None>/interact
LOAD LA4-SIZE	Load LA4-size media.	Load LA4-size media.	<None>/interact
LOAD LA4-DVPAPER	Load LA4-size black and white paper.	Load LA4-size black and white paper.	<None>/interact
LOAD LA4-CVPAPER	Load LA4-size color paper.	Load LA4-size color paper.	<None>/interact
LOAD LA4-CVTRANS	Load LA4-size transparencies.	Load LA4-size transparencies.	<None>/interact
LOAD XLA-SIZE	Load XLA-size media.	Load XLA-size media.	<None>/interact
LOAD XLA-DVPAPER	Load XLA-size black and white paper.	Load XLA-size black and white paper.	<None>/interact
LOAD XLA-CVPAPER	Load XLA-size color paper.	Load XLA-size color paper.	<None>/interact
LOAD XLA-CVTRANS	Load XLA-size transparencies.	Load XLA-size transparencies.	<None>/interact
LOAD XLA4-SIZE	Load XLA4-size media.	Load XLA4-size media.	<None>/interact
LOAD XLA4-DVPAPE	Load XLA4-size black and white paper.	Load XLA4-size black and white paper.	<None>/interact
LOAD XLA4-CVPAPE	Load XLA4-size color paper.	Load XLA4-size color paper.	<None>/interact
LOAD XLA4-CVTRAN	Load XLA4-size transparencies.	Load XLA4-size transparencies.	<None>/interact
LOAD XLW-SIZE	Load XLW-size media.	Load XLW-size media.	<None>/interact

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
LOAD XLW-DVPAPER	Load XLW-size black and white paper.	Load XLW-size black and white paper.	<None>/interact
LOAD XLW-CVPAPER	Load XLW-size color paper.	Load XLW-size color paper.	<None>/interact
LOAD 8X10-SIZE	Load 8x10 media.	Load 8x10 media.	<None>/interact
LOAD 8X10-DVFILM	Load 8x10 black and white film.	Load 8x10 black and white film.	<None>/interact
SUPPLY MISSING	The film supply magazine specified for this job is not available.	Film supply not available.	<None>/interact
RIBBON MISSING	Ribbon is missing.	Ribbon is missing.	<None>/interact
RIBBON EMPTY	Ribbon is empty.	Ribbon is empty.	<None>/interact
TOP COVER OPEN	Top cover of printer is open.	Top cover of camera is open.	<None>/interact

Additional DICOM execution status information

Printer status info./execution status info.	Description	Message string visible in the status bar	Other action for syngo/camera symbol
INVALID PAGE DES	The specified page layout cannot be printed or other page description errors have been detected.	Film job cannot be printed on this camera. Queue stopped. Please redirect film job.	Queue for this camera will be STOPPED/queue stopped
INSUFFIC MEMORY	There is not enough memory available to complete this job.	Not enough memory available in camera. Queue stopped. Please continue queue or change camera.	Queue for this camera will be STOPPED/queue stopped
NONE	General printer warning - no specific information is available. Spooling of print jobs to disk is still possible.	-	<None>/idle

Agfa Drystar 5500

General information

Block diagram

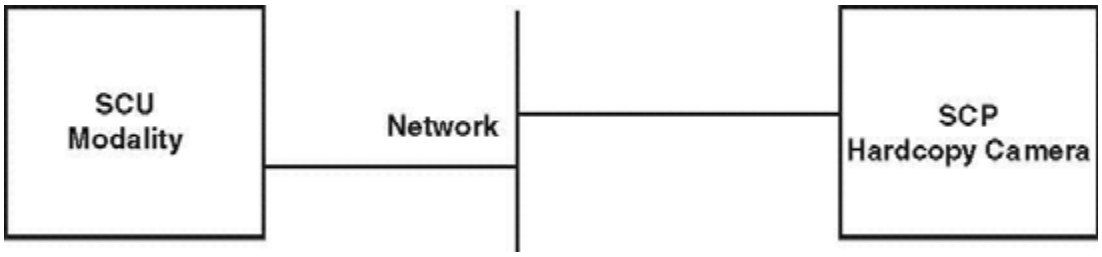

Fig. 3:

Available film sizes

Application		Status	Film type	Medium type
14" x 17"	Portrait	Yes	DT2B	Blue-based
	Landscape	Yes	DT2B	Blue-based
14" x 14"	Portrait	Yes	DT2B	Blue-based
	Landscape	No[1]	No[1]	No[1]
11" x 14"	Portrait	Yes	DT2B	Blue-based
	Landscape	Yes	DT2B	Blue-based
10” x12”	Portrait	Yes	DT2B	Blue-based
	Landscape	Yes	DT2B	Blue-based
8" x 10"	Portrait	Yes	DT2B	Blue-based
	Landscape	Yes	DT2B	Blue-based
Others		N/A	N/A	N/A

1. Film size (format) is not released and does not work properly.

Restrictions

NOTE **For HCC-independent restrictions, see (Restrictions and known effects / p. 7).**

NOTE **Maximum number of associations supported: 10**

NOTE **The background command does not work properly. The background is always white.**

NOTE **The 14" x 14" film size landscape is not allowed for use, because this format is not supported by the camera.**

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	DRY5500	Yes
Port number	104	No

HC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (Printer spec. file name)		agfadrystar5500	No
DICOM node		DS5500	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density		20	No
Pixel size [1/1000 mm]		50.0 x 50.0	No

Filming properties		Display	Changes allowed
Film sheet formats, Portrait	Number of pixels [columns x rows]	14"x17" 6922x8368 14"x14" 6882x6882 11"x14 " 5376x6922 10"x12 " 4880x5860 8"x10" 3852x4880	In “define new” Do not modify/add Select only Delete only
Film sheet formats, Landscape	Number of pixels [columns x rows]	14"x17" 8368x6922 11"x14 " 6922x5376 10"x12" 5860x4880s 8"x10" 4880x3852	
Medium type		Blue film	Yes
Film destination		Processor	No
Color appearance		Grayscale 12 bit	No
Background		Black	Yes
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Device type:	DICOM print server/printer
Device name:	DRYSTAR 5500

Manufacturer:	AGFA
SW revision:	R2.00 B1
Physical interface:	10/100 base - TP Ethernet
Network protocol:	TCP/IP
DICOM conformance statement:	Rev.1.3, May 5, 2003 Doc.No. 000737
Image memory:	128 Mbyte
Hard disk:	18 Gbyte
Number of inputs:	1 / Ethernet RJ45
Number of outputs:	No output available
Number of operating panels:	Built in

Printer settings

Variable name	Setting
Nickname	“SP_specific name”
Calling AE title	MERGE_PRINT_SCU
Number of copies	1
Print priority	Low
Polarity	Normal
Film destination output tray	Empty
Tray 1	Yes
Tray 2	Empty
Tray 3	Empty
Tray 4	Empty
Film orientation	Portrait
Trim	No
Film size ID	Empty
Medium type	Empty
Print even if film size ID/medium type is not supported	No
Kernel	Cubic high res. -smoothing factor - 2.5
Magnification	Max. - custom scale factor 1.0
Pixel size	1.0 / 1.0

Variable name	Setting
Perception LUT	Linear
Kanamori-like value	0
Custom value	Empty
Illumination (cd/m)	2000
Reflected ambient light (cd/m2)	10
Border density (OD x 100)	Black
Empty image density (OD x 100)	Black
Minimum density	Empty
Maximum density	Site 320
Annotation 1	None
Annotation 2	None
Window (%)	Empty
Level (%)	Empty
Image orientation	R0
Conformance level	1
N-event enabled	Off
Mamm modality	Site no.
Association time-out(s)	0
Image time-out(s)	0
ALLOW IMPLICIT VR LITTLE ENDIAN	Yes
ALLOW EXPLICIT VR LITTLE ENDIAN	Yes
ALLOW EXPLICIT BIG ENDIAN	Yes
Resolution	320

Variable name	Setting
Supported abstract syntax	Basic film box SOP class Basic gray PM meta SOP class Basic color PM meta SOP class Print queue management SOP class Printer SOP class Basic color image box Basic grayscale image box Basic film session SOP class Print fob SOP class Presentation LUT SOP class Basic annotation box SOP class Verification service class Print queue management SOP class
Early processing allowed	Yes

Error/warning messages (examples)

Warning or error messages of camera	Message sent by SCP (*1)	Displayed message on SCU (*2)
Supply magazine empty	EMPTY 8X10	8x10 film supply empty
Supply magazine empty	EMPTY 11X14	11x14 film supply empty
Supply magazine empty	EMPTY 14X17	14x17 film supply empty
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

NOTE

Reporting errors and warnings requires conformance level 1, but it does not function as specified : The warning messages do not conform with DICOM. If the syngo/camera symbol is always a cross but printing is possible, the Siemens default printer setting conformance level 1 is in use. The recommended setting is conformance level 0 (refer to printer setting) in which only errors are reported.

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Agfa Drystar 3000

General information

Block diagram

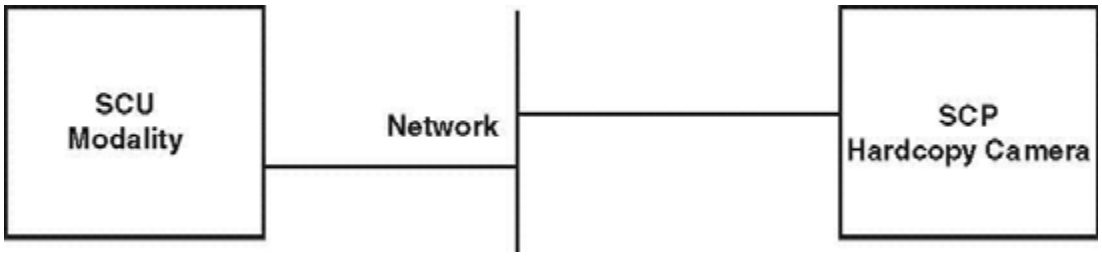

Fig. 4:

Available film sizes

Application		Status	Film type	Medium type
14" x 17"	Portrait	Yes	TM 1B Dry	Blue-based
	Landscape	Yes	TM 1B Dry	Blue-based
14" x 14"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
11" x 14"	Portrait	No[1]	TM 1B Dry	Blue-based
	Landscape	No[1]	TM 1B Dry	Blue-based
8" x 10"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
Others		N/A	N/A	N/A

1. Film size is available but not released

Restrictions

NOTE **For HCC-independent restrictions, see (Restrictions and known effects / p. 7).**

NOTE **Changing the film size requires manual modifications at the camera site.**

NOTE **Maximum number of associations supported: 4**

NOTE	**The background command does not work properly. The background is always white.**

NOTE	**Light cloudy structures visible in homogeneous areas.**

SCU/modality software configuration

Application entity Properties	**Display**	**Changes allowed**
AE title	DRY3000	Yes
Port number	104	No

HC device/ general settings		**Display**	**Changes allowed**
Type		DICOM printer	No
Class (Printer spec. file name)		agfadrystar3000	No
DICOM node		DRY3000	Yes

Filming properties		**Display**	**Changes allowed**
Hold printed film jobs		10	Yes
Min. density		20	No
Pixel size [1/1000 mm]		79.4 x 79.4	No
Film sheet formats, portrait	Number of pixels [columns x rows]	14"x17" 4224x4839 11"x14 " 3268x3924	In “define new” Do not modify/add Select only Delete only
Film sheet formats, landscape	Number of pixels [columns x rows]	14"x17" 5140x3924 11"x14" 4224x2962	
Medium type		Blue film	Yes
Film destination		Processor	Yes

Filming properties		Display	Changes allowed
Color appearance		Grayscale 12 bit	No
Background		Black	Yes
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Device type:	DICOM print server/printer
Device name:	DRYSTAR 3000
Manufacturer:	AGFA
SW revision:	MeGa 3.32, cad 32948, ecu 32950, DI301p95, R1.95, aos 32947, dcm 32956, mps 32941, OEM 43969, PNP DCM 1001
Physical interface:	10 base - TP Ethernet
Network protocol:	TCP/IP
DICOM conformance statement:	Rev.2.3, July 31, 2003
Image memory:	32 Mbyte
Hard disk:	1.2 Gbyte
Number of inputs:	1 / Ethernet RJ45
Number of outputs:	n.a.
Number of operating panels:	1 internal keypad, 1 external keypad

Printer settings

File name	Content	Remarks
pms.ini	MERGE_PRINT_SCU IDF= CFG=D:\MEDCOM2.PMS	No .idf file defined PMS.IDF is default standard
PMS.IDF	default STANDARD\1.1	Agfa layout ID: 14x17P ID1411 14x17L ID1511 14x14P ID1611 11x14P ID1211 11x14L ID1311 8x10P ID1011 8x10L ID1111
Medcom2.pms	00 pms_virgin_cfg 0 nevent_enabled 0 trim_flag 0 utl_id 1	is used (DCS), no *.idf file defined AGFA default confrmLevel is 0 (warnings) Disable N-events messages Disable trim around images LINEAR LUT

Error/warning messages (examples)

Warning or error messages of camera	Message sent by SCP (*1)	Displayed message on SCU (*2)
Supply magazine empty	SUPPLY EMPTY	Camera out of film
Switch camera from online to offline	PRINTER OFFLINE	Unspecified problem with camera
Camera started, warming up	WARMING UP	Camera is warming up
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Agfa LR5200/MG3000

General information

Block diagram

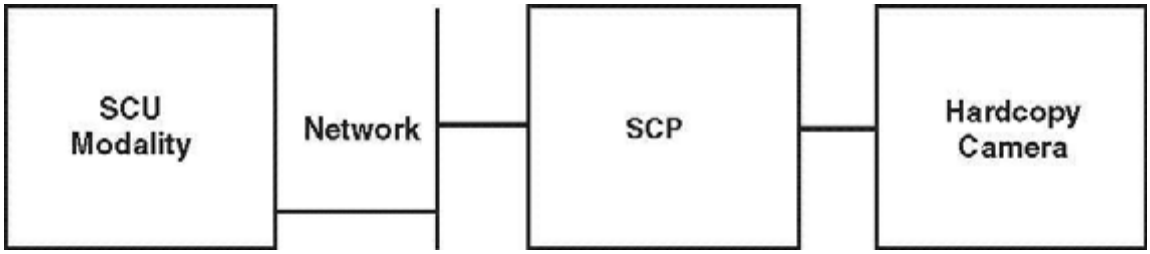

Fig. 5:

Available film sizes

Application		Status	Film type	Medium type
14" x 17"	Portrait	Yes	Scopix LT2B	Blue-based
	Landscape	Yes	Scopix LT2B	Blue-based
14" x 14"	Portrait	Yes	Scopix LT2B	Blue-based
	Landscape	No[1]	No[1]	No[1]
11" x 14"	Portrait	Yes	Scopix LT2B	Blue-based
	Landscape	Yes	Scopix LT2B	Blue-based
8" x 10"	Portrait	Yes	Scopix LT2B	Blue-based
	Landscape	Yes	Scopix LT2B	Blue-based
Others		N/A	N/A	N/A

1. Film size (format) is not released and does not work properly.

Restrictions

NOTE **For HCC-independent restrictions, see (Restrictions and known effects / p. 7).**

NOTE **Maximum number of associations supported: 4**

NOTE **The background command does not work properly.**

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	LR5200	Yes
Port number	104	No

HC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (Printer spec. file name)		agfalr5200	No
DICOM node		lr5200	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density		20	Yes
Pixel size [1/1000 mm]		80.0 x 80.0	No
Film sheet formats, portrait	Number of pixels [columns x rows]	14"x17" 4224x4839 14"x14" 4224x3897 11"x14" 3268x3924 8"x10" 2344x2647	In “define new” Do not modify/add Select only Delete only
Film sheet formats, landscape	Number of pixels [columns x rows]	14"x17" 5140x3924 11"x14" 4224x2962 8"x10" 2948x2046	
Medium type		Blue film	Yes
Film destination		Processor	Yes
Color appearance		Grayscale 12 bit	No

Filming properties		Display	Changes allowed
Background		Black	Yes
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Device type:	DICOM print server/printer
Device name:	**MG 3000**
Manufacturer:	AGFA
SW revision:	MeGa 3.32, aos 32946, cad 32946, ecu 32948, dcm 32956, OEM 49535,
Physical interface:	10 base - TP Ethernet
Network protocol:	TCP/IP
DICOM conformance statement:	Rev.1.4, April 20, 2001
Image memory:	128 Mbyte
Hard disk:	4.1 Gbyte
Number of inputs:	1
Number of outputs:	1
Number of operating panels:	None

Device type:	DICOM camera
Device name:	**LR 5200**
Manufacturer:	AGFA

SW revision:	240698
Physical interface:	FOI optic
Network protocol:	None
DICOM conformance statement:	None
Image memory:	n.a.
Hard disk:	n.a.
Number of inputs:	1
Number of outputs:	n.a.
Number of operating panels:	1

Printer settings

File name	Content	Remarks
pms.ini	MERGE_PRINT_SCU IDF= CFG=D:\MEDCOM2.PMS	No .idf file defined PMS.IDF is default standard
PMS.IDF	default STANDARD\1.1	Agfa layout ID: 14x17P ID1411 14x17L ID1511 14x14P ID1611 11x14P ID1211 11x14L ID1311 8x10P ID1011 8x10L ID1111
Medcom2.pms	00 pms_virgin_cfg 0 nevent_enabled 0 trim_flag 0 utl_id 1	Is used (DCS), no *.idf file defined AGFA default confrmLevel is 0 (warnings) Disable N-events messages Disable trim around images LINEAR LUT

Error/warning messages (examples)

Warning or error messages of camera	Message sent by SCP (*1)	Displayed message on SCU (*2)
Supply magazine empty	SUPPLY EMPTY	Camera out of film
Switch camera from online to offline	PRINTER OFFLINE	Unspecified problem with camera
Camera started, warming up	WARMING UP	Camera is warming up
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Fuji Drypix 7000

General information

Block diagram

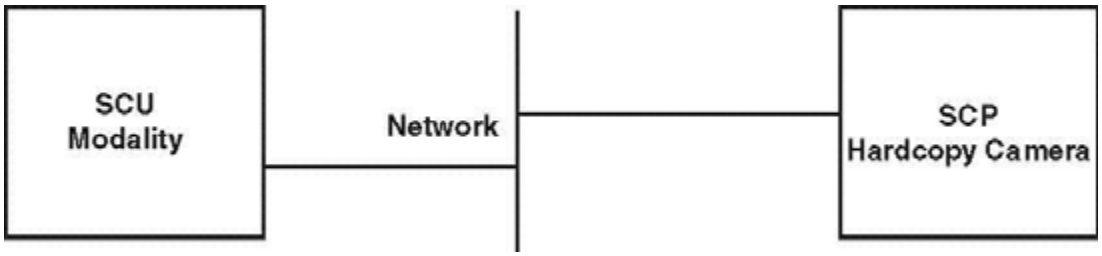

Fig. 6:

Available film sizes

Application		Status	Film type	Medium type
14" x 17"	Portrait	Yes	DI-HL	Blue-based
	Landscape	Yes	DI-HL	Blue-based
14" x 14"	Portrait	Yes	DI-HL	Blue-based
	Landscape	No[1]	No[1]	No[1]
11" x 14"	Portrait	Yes	DI-HL	Blue-based
	Landscape	Yes	DI-HL	Blue-based
10" x 12"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
8" x 10"	Portrait	Yes	DI-HL	Blue-based
	Landscape	Yes	DI-HL	Blue-based
Others		N/A	N/A	N/A

1. Film size (Format) is not released and does not work properly.

Restrictions

NOTE **For HCC-independent restrictions, see (Restrictions and known effects / p. 7).**

NOTE **For film size 14" x 14" landscape orientation is not supported.**

NOTE	Maximum number of associations supported: 10

NOTE	The background command works fine.

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	DRY7000	Yes
Port number	104	No

HC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (Printer spec. file name)		fujidrypix7000	No
DICOM node		dry7000	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density		20	Yes
Pixel size [1/1000 mm]		100.0 x 100.0	No

Filming properties		Display	Changes allowed
Film sheet formats, portrait	Number of pixels [columns x rows]	14"x17" 3500x4170 14"x14" 3500x3410 11"x14" 2500x3495 8"x10" 1954x2410	In “define new” Do not modify/add Select only Delete only
Film sheet formats, landscape	Number of pixels [columns x rows]	14"x17" 4220x3360 11"x14 " 3600x2450 8"x10 " 2466x1898	
Medium type		Blue film	Yes
Film destination		Processor	No
Color appearance		Grayscale 12 bit	No
Background		Black	Yes
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Manufacturer/device type:	DICOM print server (SCP)
Device name:	Drypix 7000
Manufacturer:	FUJI
SW revision:	A01-07
Physical type:	Ethernet, 10/100 base T/Tx, RJ45

Manufacturer/device type:	DICOM print server (SCP)
Network protocol:	TCP/IP
DICOM conformance statement:	November 2002, 1st edition.
Image memory:	512 MB RAM (standard)
Hard disk:	20 GB
Number of inputs:	1 network
Number of outputs:	n.a.
Number of operating panels:	1 built in

Printer settings

File name	Content	Remarks
2003-06-16_DryPix7000-Siemens-BasicRelease_Ver01.00.doc	**Protocol:**	Client: MERGE_PRINT SCU
	0107H-Warning	Indicate
	0116H-Warning	Indicate
	B604H-Warning	Indicate
	N-Event-ReportRQ	Disabled
	Presentation LUT	No
	Use max./min. density	Modality
	Magnify:	
	Procedure	A-VR
	Default smooth type	SHARP
	Adjustment param. SHARP	
	Edge detection	Off
	Detection level	600
	Sharpness	130
	Char. mode	White
	Adjustment param. MEDIUM	
	Edge detection	On
	Detection level	600
	Sharpness	80
	Char. mode	White

File name	Content	Remarks
	Adjustment param. SMOOTH	
	Edge detection	On
	Detection level	800
	Sharpness	30
	Char. mode	White
	LUT:	
	Procedure	SAR
	Default LUT	1
	LUT	
	r table number	17
	Max. density	300
	Min. density	0
	Tuning point 1	
	Density	50
	Shift	1
	Contrast	100
	Tuning point 2	
	Density	70
	Shift	-1
	Contrast	100
	Tuning point 3	
	Density	150
	Shift	-3
	Contrast	100
	Tuning point 4	
	Density	270
	Shift	-8
	Contrast	100
	Tuning point 5	
	Density	290
	Shift	-9

File name	Content	Remarks
	Contrast	100
	Output format:	
	Border density	300
	Trim density	0
	Trim	Off
	Number of copies	1
	Margin between images	20
	Image layout	Concentration
	Film size	14INX17IN
	Film orientation	Portrait
	Mirror	Off

Error/warning messages (examples)

Warning or error messages of camera	Message sent by SCP (*1)	Displayed message on SCU (*2)
No film in supply magazine	WARNING SUPPLY EMPTY	Camera out of film
Cover open	WARNING COVER OPEN	Camera cover, drawer or door open
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Fuji Drypix 3000

General information

Block diagram

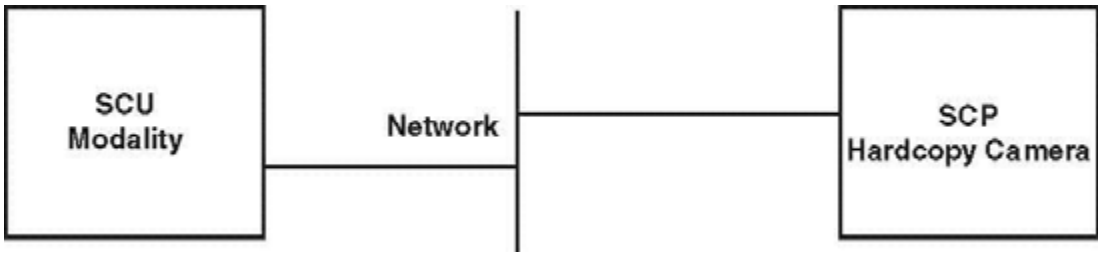

Fig. 7:

Available film sizes

Format		Status	Film type	Medium type
14" x 17"	Portrait	Yes	DI-AT	Blue-based
	Landscape	Yes	DI-AT	Blue-based
14" x 14"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
11" x 14"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
8" x 10"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
Others		N/A	N/A	N/A

Restrictions

NOTE

For HCC-independent restrictions, see (Restrictions and known effects / p. 7).

NOTE

The DI-AT film type requires a specific densitometer characteristic. Density measurement using the well-known X-Rite 301 densitometer is only possible if the FUJI/X-Rite color compensating filter kit CM500 is installed on the X-Rite 301 and calibrated as described in the X-Rite letter.

NOTE

Additional labeling and trim have been switched off.

NOTE	Maximum number of associations supported: 6

NOTE	The background command does not work properly. The background is always white.

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	DRYPIX3000	Yes
Port number	104	No

HC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (Printer spec. file name)		fujidrypix3000	No
DICOM node		drypix3000	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density		20	Yes
Pixel size [1/1000 mm]		84.7 x 84.7	No
Film sheet formats, portrait	Number of pixels [columns x rows]	14" x17 " 4072x4891	In “define new” Do not modify/add Select only Delete only
Film sheet formats, landscape	Number of pixels [columns x rows]	14"x17" 4972x3993	
Medium type		Blue film	Yes
Film destination		Processor	No
Color appearance		Grayscale 12 bit	No
Background		Black	Yes
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Manufacturer/device type:	**DICOM print server (SCP)**
Device name:	Drypix 3000
Manufacturer:	FUJI
SW revision:	A03 main unit / A04 LAN board
Physical type:	100/10 base -T Ethernet
Network protocol:	TCP/IP
DICOM conformance statement:	1st edition March 31, 2001,
Image memory:	Approx. 56 MB
Hard disk:	None
Number of inputs:	1
Number of outputs:	n.a.
Number of operating panels:	1 panel

Printer settings

File name	**Content**	**Remarks**
None	**FUJIPRINTER**	**Provided by FUJI**
	Function	Properties
	Protocol information	Protocol = DICOM
		Normal AE title = DRYPIX 3000
		Role = SCP
		Port no. = 104
		Data transfer timeout = 300
	Annotation	Annotation size = 1:half
	Association count	6

File name	Content	Remarks
None	**FUJIPRINTER**	**Provided by FUJI**
	Logging DICOM	0 : none
	Log auto save	0 : No
	Default client	0 : No
	Printer	Model = DRYPIX
		Manufacturer = FUJI PHOTO FILM CO, LTD
	MERGE_PRINT_SCU	None
	Protocol	Attribute list error (0107H warning) = indicate
		Attribute value out of range (0116H warning) = indicate
		Image size larger than image box (B604H warning) = 1: Indicate
		N-Event-Report-RQ = 0 disable
		Change film size = 0 : 0116H ()W
		Use system timeout = 1: Yes
	Use extension format	Use default annotation = 1: No
	Magnify:	Procedure = 1:SSM
		Default smoothing type = 1:SHARP
	LUT:	Procedure = 0: SAR
		Default LUT = 1
		rtable no. = 17
		Max. density = 300
		Min. density = 0

File name	Content	Remarks
None	**FUJIPRINTER**	**Provided by FUJI**
	Output format	Border density = 300
		Polarity (pos./neg.) = 1: Normal (pos.)
		Trim density = 0
		Trim = 0: Off
		Trim with = 1
		Number of copies = 1
		Margin between image = 20
		Image layout = 0: Concentration
		Film size = 1: 35x43 (14INx17IN)
		Medium type (base color) = 1 blue
		Film orientation = 1: PORTRAIT
		Mirror = 0: OFF (normal)

Error/warning messages (examples)

Warning or error messages of camera	Messages sent by SCP (1*)	Displayed message on SCU (*2)
Camera is warming up	n.a.	Connection to camera is not available
Camera is switched off	PRINTER OFFLINE	Connection to camera is not available
Magazine is empty	SUPPLY EMPTY	CAMERA out film
Film jam in camera	UNKNOWN	Camera info.: UNKNOWN. Queue stopped
No magazine	UNKNOWN	Camera info.: UNKNOWN. Queue stopped
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Fuji Drypix 1000

General information

Block diagram

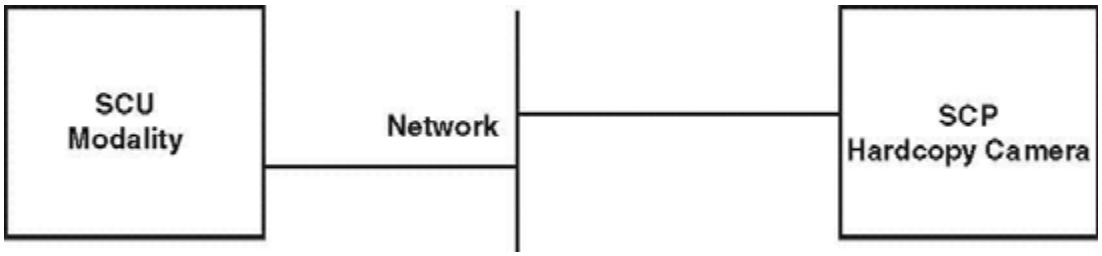

Fig. 8:

Available film sizes

Format		Status	Film type	Medium type
14" x 17"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
14" x 14"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
11" x 14"	Portrait	Yes	DI-AT	Blue-based
	Landscape	Yes	DI-AT	Blue-based
8" x 10"	Portrait	Yes	DI-AT	Blue-based
	Landscape	Yes	DI-AT	Blue-based
Others		N/A	N/A	N/A

Restrictions

NOTE

For HCC-independent restrictions, see (Restrictions and known effects / p. 7).

NOTE

The DI-AT film type requires a specific densitometer characteristic. Density measurement using the well-known X-Rite 301 densitometer is only possible if the FUJI/X-Rite color compensating filter kit CM500 is installed on the X-Rite 301 and calibrated as described in the X-Rite letter.

NOTE

Additional labeling and trim have been switched off.

NOTE	Maximum number of associations supported: 6

NOTE	The background command does not work properly. The background is always white.

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	DRYPIX1000	Yes
Port number	104	No

HC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (Printer spec. file name)		fujidrypix1000	No
DICOM node		drypix1000	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density		20	Yes
Pixel size [1/1000 mm]		84.7 x 84.7	No
Film sheet formats, Portrait	Number of pixels [columns x rows]	11" x14" 2960x4005 8”x10” 2280x2812	In “define new” Do not modify/add Select only Delete only
Film sheet formats, Landscape	Number of pixels [columns x rows]	11"x14" 4096x2871 8”x10” 2876x2215”	
Medium type		Blue film	Yes
Film destination		Processor	No

Filming properties		Display	Changes allowed
Color appearance		Grayscale 12 bit	No
Background		Black	Yes
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Manufacturer/device type:	DICOM print server (SCP)
Device name:	Drypix 1000
Manufacturer:	FUJI
SW revision:	A03 main unit / A04 LAN board
Physical type:	100/10 base -T Ethernet
Network protocol:	TCP/IP
DICOM conformance statement:	1st edition March 31, 2001,
Image memory:	24MB
Hard disk:	1
Number of inputs:	1
Number of outputs:	n.a.
Number of operating panels:	1

Printer settings

File name	Content	Remarks
None	**FUJIPRINTER**	**Provided by FUJI**
	Function	Properties

File name	Content	Remarks
None	**FUJIPRINTER**	**Provided by FUJI**
Protocol information		Protocol = DICOM
		Normal AE title = DRYPIX 1000
		Role = SCP
		Port no. = 104
		Data transfer timeout = 300
Annotation		Annotation size = 1:half
Association count		6
Logging DICOM		0 : None
Log auto save		0 : No
Default client		0 : No
Printer		Model = DRYPIX
		Manufacturer = FUJI PHOTO FILM CO, LTD
MERGE_PRINT_SCU		None
Protocol		Attribute list error (0107H warning) = indicate
		Attribute value out of range (0116H warning) = indicate
		Image size larger than image box (B604H warning) = 1: Indicate
		N-Event-Report-RQ = 1disabled
		Change film size = 0: 0116H ()W
		Use system timeout = 1: Yes
Use extension format		Use default annotation = 1: No
Magnify:		Procedure = 1:SSM
		Default smoothing type = 1:SHARP
LUT:		Procedure = 0: SAR
		Default LUT = 1
		rtable no. = 17
		Max. density = 300
		Min. density = 20

File name	Content	Remarks
None	**FUJIPRINTER**	**Provided by FUJI**
	Output format	Border density = 300
		Polarity (pos./neg.) = 1: Normal (pos.)
		Trim density = 0
		Trim = 0: Off
		Trim width = 1
		Number of copies = 1
		Margin between image = 20
		Image layout = 0: Concentration
		Film size = 1: 35x43 (11INx14IN)
		Medium type (base color) = 1 blue
		Film orientation = 1: PORTRAIT
		Mirror = 0: OFF (normal)

Error/warning messages (examples)

Warning or error messages of camera	Messages sent by SCP (1*)	Displayed message on SCU (*2)
Camera is warming up	n.a.	Connection to camera is not available
Camera is switched off	PRINTER OFFLINE	Connection to camera is not available
Magazine is empty	SUPPLY EMPTY	CAMERA out of film
Film jam in camera	UNKNOWN	Camera info.: UNKNOWN. Queue stopped
No magazine	UNKNOWN	Camera info.: UNKNOWN. Queue stopped
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Fuji FM DPL / FN-PS551

General information

Block diagram

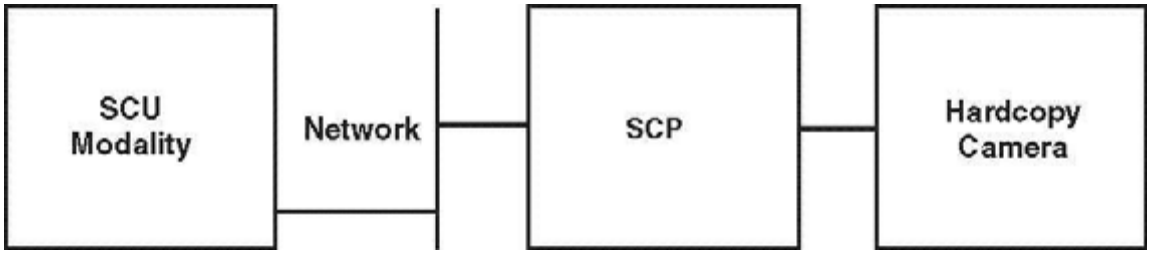

Fig. 9:

Available film sizes

Application		Status	Film type	Medium type
14" x 17"	Portrait	Yes	DI-AL	Blue-based
	Landscape	Yes	DI-AL	Blue-based
14" x 14"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
11" x 14"	Portrait	Yes	DI-AL	Blue-based
	Landscape	Yes	DI-AL	Blue-based
8" x 10"	Portrait	Yes	DI-AL	Blue-based
	Landscape	Yes	DI-AL	Blue-based
Others		N/A	N/A	N/A

Restrictions

NOTE **For HCC-independent restrictions, see (Restrictions and known effects / p. 7).**

NOTE **Additional labeling and trim have to be switched off.**

NOTE **Only one camera connection to FN-PS551 was used for the qualification.**

NOTE **Maximum number of associations supported: 6**

NOTE	The background command works fine.

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	FMDPL	Yes
Port number	104	No

HC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (Printer spec. file name)		fujifmdpl	No
DICOM node		FMDPL	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density		20	Yes
Pixel size [1/1000 mm]		100 x 100	No
Film sheet formats, Portrait	Number of pixels [columns x rows]	14"x17" 3460x4168 11"x14" 2536x3522 8"x10" 1952x2410	In “define new” Do not modify/add Select only Delete only
Film sheet formats, Landscape	Number of pixels [columns x rows]	14"x17" 4200x3360 11"x14" 3560x2440 8"x10" 2464x1898	
Medium type		Blue film	Yes

Filming properties		Display	Changes allowed
Film destination		Processor	No
Color appearance		Grayscale 12 bit	No
Background		Black	Yes
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Device type:	DICOM print server/printer
Device name:	**FN-PS551**
Manufacturer:	FUJI photo film
SW revision:	**A 06**
Physical interface:	100/10 base - T Ethernet, UTP/STP
Network protocol:	TCP/IP
DICOM conformance statement:	FN-PS551 May 2001, 4th Edition
Image memory:	6GB (128 MB)
Hard disk:	3 Gbyte
Number of inputs:	1 Ethernet - board
Number of outputs:	1 SCSI-PEI01A board (FUJI-DMS protocol)
Number of operating panels:	1 PC keyboard

Device type:	**DICOM camera**
Device name:	**FM - DPL**
Manufacturer:	FUJI photo film
SW revision:	**W01-02 (main unit)**
Physical interface:	SCSI interface

Network protocol:	None
DICOM conformance statement:	None
Image memory:	192 MB
Hard disk:	None
Number of inputs:	1
Number of outputs:	n.a.
Number of operating panels:	1 built-in keypad

Printer settings

File name	Content	Remarks
None	**FUJI service utility setting**	**Provided by FUJI**
	Function	Properties
	Protocols: DICOM	Network port no. = 104
		Data transfer timeout = 600 sec.
		Print server application entity = one to each printer
		Data receive if the printer is offline = enable
	Printer: FMDPL	Properties
	Name:	AE title of DICOM = FMDPL
		Fine printing = off
	Interface:	Interface = E-i/f
		Pixel clock = 1.0 µsec/pixel
		Version = type 1
		Film size = 14x17 (dimmed)
		Film medium = blue (dimmed)
	Model:	Model = FN-PS551
		Manufacturer = FUJI PHOTO FILM CO, LTD
	Clients: DICOM: MERGE_PRINT SCU	Properties
	Name:	Hostname = MERGE_PRINT SCU
		IP address = (from system administrator)

File name	Content	Remarks
None	**FUJI service utility setting**	**Provided by FUJI**
	Protocol:	Protocol = DICOM
		Application entity title = MERGE_PRINT SCU
		Attribute list error(0107H warning) = indicate
		Attribute value out of range(0116H warning) = indicate
		Image size larger than image box(B604H warning) = indicate
		N-Event-Report-RQ = disabled
		Use presentation LUT = No
		Data transfer timeout = enabled
		Use extension format = No
	Magnify:	Procedure = SSM
		Default smoothing type = SHARP
	LUT:	Procedure = SAR
		Default LUT = 1 (linear)
		Adj. parameter LUT = 1
		rtable no. = 17
		Max. density = 300
		Min. density = 15
		Number of tuning points = 0
	Printer:	Fixed, FMDPL

File name	Content	Remarks
None	**FUJI service utility setting**	**Provided by FUJI**
	Output format1:	Border density = 300
		Polarity = normal (pos.)
		Trim density = 300
		Trim = off
		Trim width = 1 pixel
		Number of copies = 1
		Film size = 14x17
		Medium type = blue
		Film orientation = portrait
		Mirror = OFF (normal)
		Overlay threshold density = 120
	Output format 2:	Margin between images = 20 pixel
		Image layout = concentration
	Annotation: Print server	Upper left = (nothing selected)
		Upper center = (nothing selected)
		Upper right = (nothing selected)
		Lower left = (nothing selected)
		Lower center = (nothing selected)
		Lower right = (nothing selected)
	Logging:	Network = (No)
		Printer = (No)
		DICOM = normal
		Output image to file = off
		Precedence = Input
	Sorting:	Sorting conditions = (nothing selected)
2 FN-PS551(each with a separate channel) can be connected to FM-DPL. Only one printer connection is used for the test.		

Error/warning messages (examples)

Warning or error messages of camera	Message sent by SCP (*1)	Displayed message on SCU (*2)
1. Printer in UTILITY mode. AUTO F.D.C. for film tray 2	WARNING PRINTER OFFLINE	Camera offline Printer icon cross with !
2a. Shutter inserted (8x10), camera ready	NORMAL NORMAL	Camera ready
2b. Alarm beep on printer - display: Remove tray 2 shutter (shutter inserted)	FAILURE UNKNOWN	Printer icon cross with X. Camera info.: UNKNOWN Queue stopped
2c. Shutter removed	NORMAL NORMAL	Camera ready
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Kodak DryView 8900

General information

Block diagram

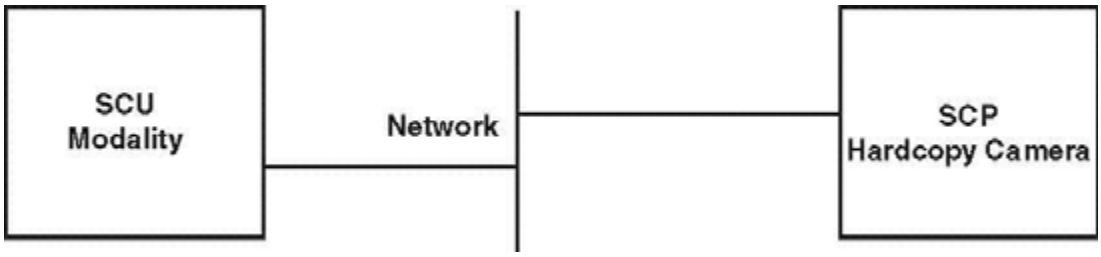

Fig. 10:

Available film sizes

Application		Status	Film type	Medium type
14" x 17"	Portrait	Yes	DVB	Blue-based
	Landscape	Yes	DVB	Blue-based
14" x 14"	Portrait	Yes	DVB	Blue-based
	Landscape	Yes	DVB	Blue-based
11" x 14"	Portrait	Yes	DVB	Blue-based
	Landscape	Yes	DVB	Blue-based
10" x 12"	Portrait	Yes	DVB	Blue-based
	Landscape	Yes	DVB	Blue-based
8" x 10"	Portrait	Yes	DVB	Blue-based
	Landscape	Yes	DVB	Blue-based
Others		N/A	N/A	N/A

Restrictions

NOTE

For HCC-independent restrictions,see (Restrictions and known effects / p. 7).

NOTE

Minimum density command is not supported. The value of the minimum density is the value of the fog on the film.

NOTE

Maximum number of associations supported: 12

NOTE **On a film with 4 images, the 100% modulation (SMPTE) of small line pairs is reduced.**

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	DV8900[1]	Yes
Port number	5040	No

1. Do not use an AE title such as “NER_...”

HCC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (Printer spec. file name)		kodak8900	No
DICOM node		DV8900	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density		20	Yes
Pixel size [1/1000 mm]		78.15 x 78.15	No

Filming properties		Display	Changes allowed
Film sheet formats, Portrait	Number of pixels [columns x rows]	14"x17" 4448x5306 14"x14" 4448x4331 11"x14" 3356x4448 10"x12" 3143x3671 8"x10" 2371x3143	In “define new” Do not modify/add Select only Delete only
Film sheet formats, Landscape	Number of pixels [columns x rows]	14"x17" 5306x4448 14"x14" 4331x4448 11"x14" 4448x3356 10"x12" 3671x3143 8"x10" 3143x2371	
Medium type		Blue film	Yes
Film destination		Processor	No
Color appearance		Grayscale 12 bit	No
Background		Black	Yes
Transformation		**Replicate**	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Manufacturer/device type:	DICOM print server (SCP)
Device name:	DryView 8900
Manufacturer:	Kodak
SW revision:	8900_2.00.b3 / MIM 5.6b3
Physical type:	Ethernet, RJ45
Network protocol:	TCP/IP
DICOM conformance statement:	Rev. C, January 28, 2004
Image memory:	768 MB
Hard disk:	40 GB
Number of inputs:	n.a.
Number of outputs:	n.a.
Number of operating panels:	1 built-in touch panel

Printer settings

Content
8900 setup: (Provided by Kodak) ➪ **On configuration, system, network:** Host Name=DV8900, IPAddr=accordingly Subnet Mask=accordingly, Gateway Addr=accordingly On configuration, DICOM SCP, communications: Port=5040, Association Limit=12, Source Name=DICOM **On configuration, destination:** AE title: DV8900 Media types: Media=35x43cm, 9100x11037, 10781, Any Media types: Media=35x35cm,9100x9087, 8831, Any Media types: Media=11"x14", 7137x9100, 8844, Any Media types: Media=10"x12", 6490x7767, 7511, Any Media types: Media=8"x10", 5167x6490, 6234, Any Formatting: Aspect Ratio Mix Page=On, Aspect Ratio Mix Row=On Formatting: Image Size Mix in Std Fmt=On, Image Size Mix Row=On Formatting: DICOM Annotation Box=On, Req.Image Size=On Formatting: Req.Size Scale=On, Req.Size Mix Page=On Formatting: Req.Size Mix Row=On, Trim=On, Formatting: True Landscape=On, Rotation=On Formatting: Minify/Crop=On, Tone Scaling on Image Basis=On Ranges: Formatting: Max Img Band=7, Max Band Page=7, Max Img Cols=0 Formatting: Max Img Rows=0, Pixel Pitch=25.5910, Min Horiz Sep=4 Formatting: Min Vert Sep=4, Trim Width Enabled=4 Formatting: Trim Width Disabled=0, Maximum DMAX=3.30

Content
8900 setup: (Provided by Kodak) ➪ **On configuration, DICOM SCP, SCP services,** Select specific modality, modify: Negotiate presentation LUT=N, Negotiate Color Print=No TFT/ULUT= Wrkstn2a.w87 (Always=Y) Contrast= 1(Always=Y), Smoothing type=0 (Always=Y), Image Polarity= Normal, (Always=N) Dmin=0.00 (Always=N) Dmax=3.00 (Always=N) Other options: NeventReports=No (Always=Y), Warnings=Yes Print Priority=Normal (Always=N), Border=3.99 (Always=N) 2mm Border=No Film Base=Blue Film (Always=N), Film Size=14INx17IN (Always=N) Sorter Bin=Bin1 (Always=N), Print Date=No, Print Time=No, Page Nbr=No, Hosp.Name=No, Modality ID=No Annotation Override=No, Density Patch=Yes, Image Resizing=Minify/Scale (Always=N), Text Box Location=None, Source ID=varic

Error/warning messages (examples)

Warning or error messages of camera	Message sent by SCP (*1)	Message displayed on SCU (*2)
No film in supply cartridge	SUPPLY EMPTY 14X14 BLUE	14x14 blue film supply empty
Camera offline	PRINTER OFFLINE	Connection to camera is not available
Cover open (front door)	WARNING COVER OPEN	Camera cover, drawer or door open
Film jam	FILM JAM	Film jam
Calibration error	CALIBRATION ERR	Problem in calibration. Film quality may not be optimal
Unable to identify film cartridge	BAD SUPPLY MGZ	Problem with supply magazine
Camera is warming up	PROC INIT	Processor initializing

Warning or error messages of camera	Message sent by SCP (*1)	Message displayed on SCU (*2)
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Kodak DryView 8700-Plus/PACS Link MIM 200

General information

Block diagram

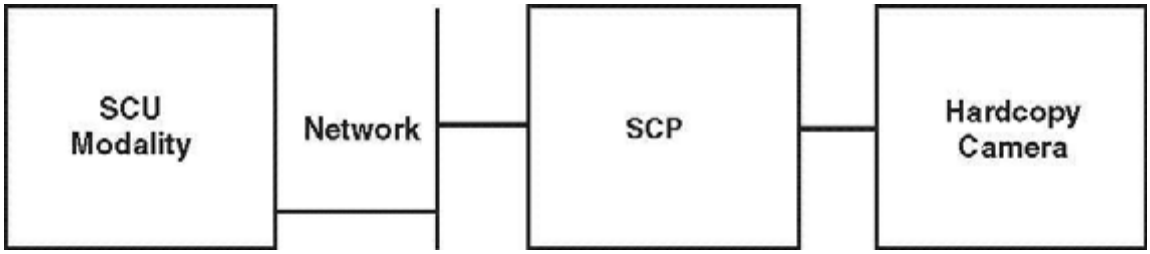

Fig. 11:

Available film sizes

Application		Status	Film type	Medium type
14" x 17"	Portrait	Yes	DVB	Blue-based
	Landscape	Yes	DVB	Blue-based
14" x 14"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
11" x 14"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
10" x 12"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
8" x 10"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
Others		N/A	N/A	N/A

Restrictions

NOTE **For HCC-independent restrictions, see (Restrictions and known effects / p. 7).**

NOTE **Camera does not support minimum density command.**

NOTE **Maximum number of associations supported: 9**

NOTE	The background command does not work properly.

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	DV8700[1]	Yes
Port number	5040	No

1. Do not use an AE title such as “NER_...”

HCC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (Printer spec. file name)		imation8700	No
DICOM node		DV8700	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density		20	Yes
Pixel size [1/1000 mm]		78.0 x 78.0	No
Film sheet formats, Portrait	Number of pixels [columns x rows]	14"x17" 4096x5220	In “define new” Do not modify/add Select only Delete only
Film sheet formats, Landscape	Number of pixels [columns x rows]	14"x17" 5220x4096	
Medium type		Blue film	Yes
Film destination		Processor	No
Color appearance		Grayscale 12 bit	No
Background		Black	Yes
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Device type:	**DICOM print server (SCP)**
Device name:	PACS Link MIM 200
Manufacturer:	Kodak
SW revision:	V 6.1
Physical interface:	100/10 base T Ethernet, UTP/STP
Network protocol:	TCP/IP
DICOM conformance statement:	Rev. G., Oct. 17, 2003
Image memory:	256 MB
Hard disk:	4 GB
Number of inputs:	1 Ethernet board (RJ45)
Number of outputs:	1 Fopcil board (fiber)
Number of operating panels:	1 keypad

Device type:	**Printer**
Device name:	DryView 8700
Manufacturer:	Kodak
SW revision:	1.34
Physical interface:	Fiber optic
Network protocol:	None
DICOM conformance statement:	None
Image memory:	32 MB
Hard disk:	n.a.
Number of inputs:	1 input module (fiber optic)

Device type:	Printer
Number of outputs:	n.a.
Number of operating panels:	1 built-in keypad

Printer settings

Content:	Configuration
	MIM 200 setup
	On configure, network:
	Node Name=MIM, IPAddr=accordingly Subnet Mask=accordingly, Gateway Addr=accordingly
	On configure, input, network, add:
	Protocol=DICOM 3.0, Log.Name=DICOM, Type/Com=Keypad/COM9
	On configure, destination, add, print, direct, qualified, 8700, set:

Content:	Configuration
	➪ General remarks: Log.Name=8700 General remarks: Database Name=8700, Model=8700, Memory=32 Media info.: Media=35x43cm, 4096x5223, 5133, Blue Output params.: Cmd=SuperSet, Baud=19200, Data=8,Stop=1, Parity=None Output params.: Pixel=12, Header/Line, Transfer=2000 KHz, Acq=60 Supported item: Collation=On, Text=On, Tone Scaling=On, Rotation=On Interpolation: NoMag=On, Bilin=On, Repl=On,Cubic Spline=On Format types: Custom=On, Slide=On, Row Symmetric=On Format types: 1, 2, 4, 6, 8, 9, 12, 15, 16, 20, 24, 30, 35=On Formatting: Aspect Ratio Mix on Page=On, Image Size Mix in Std Fmt=On Formatting: DICOM Annotation Box=On, Req.Size Scale=On Formatting: Req.Size Mix in Row=On, Trim=On Formatting: Aspect Ratio Mix in Row=On, Image Size Mix in Row=On Formatting: Req.Image Size=On, Req.Size Mix on Page=On Formatting: True Landscape=On Formatting: Max Img per Band=20, Max Band per Page=20, Max Img Col=0 Formatting: Max Img Row=0, Min Horiz Sep=2, Min Vert Sep=2 Formatting: Trim Width Enabled=2, Trim Width Disabled=0 Formatting: Pixel Pitch=12.8205 Image processing: Grayscale=On, Minify=On, Max Image Dmax=3.1 M952 Usage: Min H/V Mag=1, Max H/V Mag=64, Min Dmax 952=1.7
	On configure, SCP services, select the specific modality, modify:

Content:	Configuration
	➪ Image resizing, Resizing <M/S>=Minify/Scale, Always Apply=N Relocate Text Box, Location = none N-EVENT Reporting, Reporting=N, Always Apply=Y Warning Status=Y PLUT=N Tone Scaling=PL (PerceptionLUT), Always Apply=Y Curve Shape/TFT, TFT/ULUT= Wrkstn2a.w87, Always Apply=Y Contrast (dry)=03, Always Apply=N Interp. /Smoothing, Smoothing Type=0, Always Apply=N Image Dmin=0.00, Always Apply=N, Image Dmax=3.00, Always Apply=N Polarity=Normal, Always Apply=N Border=3.99, Always Apply=N Size=14INx17IN, Always Apply=N Base=Blue Film, Always Apply=N Priority=Normal, Always Apply=N Page Annotation, Annotation Setup, Always Apply=N, Modality ID=Off, Hospital Name=Off, Print Date=Off, Print Time=Off, Page Number=Off Basic Color=N
	8700 Plus setup
	On COMM menu: 969 default
	On IMAGE menu: TFT=VER693C0, Dmax=3.00, Contrast=6, Density=14
	On EIB menu: Pixel=12, Header/Line, Port=0, Parity=Disable Even, Time-out=60

Error/warning messages (examples)

Warning or error messages of camera	Message sent by SCP (*1)	Message displayed on SCU (*2)
Cover open	WARNING COVER OPEN	Camera cover, drawer or door open
Printer: OFF	FAILURE PRINTER DOWN	Camera down
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Kodak DryView 8200/PACS Link MIM 200

General information

Block diagram

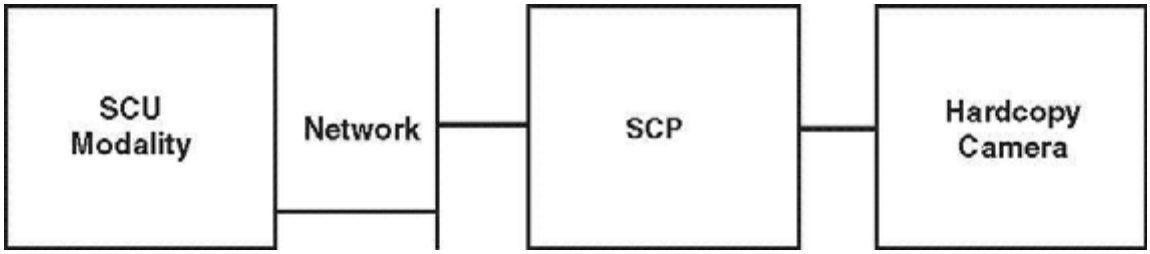

Fig. 12:

Available film sizes

Application		Status	Film type	Medium type
14" x 17"	Portrait	Yes	DVB	Blue-based
	Landscape	Yes	DVB	Blue-based
14" x 14"	Portrait	Yes	DVB	Blue-based
	Landscape	Yes	DVB	Blue-based
11" x 14"	Portrait	Yes	DVB	Blue-based
	Landscape	Yes	DVB	Blue-based
10" x 12"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
8" x 10"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
Others		N/A	N/A	N/A

Restrictions

NOTE **For HCC-independent restrictions, see (Restrictions and known effects / p. 7).**

NOTE **Minimum density command is not supported.**

NOTE **Maximum number of associations supported: 9**

NOTE	The background command does not work properly.

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	DV8200[1]	Yes
Port number	5040	No

1. Do not use an AE title such as “NER_...”

HCC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (printer spec. file name)		kodak8200	No
DICOM node		DV8200	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density		20	Yes
Pixel size [1/1000 mm]		78.0 x 78.0	No
Film sheet formats, Portrait	Number of pixels [columns x rows]	14"x17" 4360x5220 14"x14" 4360x4244 11"x14" 3272x4360	In “define new” Do not modify/add Select only Delete only
Film sheet formats, Landscape	Number of pixels [columns x rows]	14"x17" 5220x4360 14"x14" 4244x4360 11"x14" 4360x3272	

Filming properties		Display	Changes allowed
Medium type		Blue film	Yes
Film destination		Processor	No
Color appearance		Grayscale 12 bit	No
Background		Black	Yes
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Device type:	DICOM print server (SCP)
Device name:	PACS Link MIM 200
Manufacturer:	Kodak
SW revision:	V 6.1
Physical interface:	IBM, x series 205
Network protocol:	TCP/IP
DICOM conformance statement:	DCM, Rev. G, Oct.17, 2003
Image memory:	128 MB
Hard disk:	2 GB
Number of inputs:	1 Ethernet board (RJ45), 100/10 base T
Number of outputs:	1 Copcil card
Number of operating panels:	1 keypad

Device type:	Printer
Device name:	DryView 8200
Manufacturer:	Kodak
SW revision:	3.5
Physical interface:	100 / 10 base T Ethernet, UTP/STP

Device type:	Printer
Network protocol:	TCP/IP
DICOM conformance statement:	n.a.
Image memory:	50 MB
Hard disk:	n.a.
Number of inputs:	1 network card
Number of outputs:	n.a.
Number of operating panels:	1 built-in keypad

Printer settings

Content:	Configuration
	MIM 200 setup
	On configure, network:
	Node Name=MIM, IPAddr=accordingly Subnet Mask=accordingly, Gateway Addr=accordingly
	On configure, input, network, add:
	Protocol=DICOM 3.0, Log.Name=DICOM, Type/Com=Keypad/COM9
	On configure, destination, add, print, direct, qualified, 8200, set:

Content:	Configuration
	➪ General remarks: Log.Name=8200, IPAddr=100.100.100.40 General remarks: Database Name=8200, Model=8200, Memory 32 Media info.: Media=35x43cm, 4361x5223, 5133, Any (Blue, Clear) Media=35x35cm, 4361x4247, 4157, Any (Blue, Clear) Media=11inx14in, 3272x4361, 4271, Any (Blue, Clear) Supported item: Collation=On, Text=On, Tone Scaling=On, Supported item: Remote Image Deletion=On, Rotation=On Interpolation: No Magnification=On, Bilin=On, Repl=On, Interpolation: CubicSpline=On, Cubic Convolution 2=On Format types: Custom=On, Slide=On, Row Symmetric=On Format types: 1, 2, 4, 6, 8, 9, 12, 15, 16, 20, 24, 30, 35=On Formatting: Aspect Ratio Mix on Page=On, Image Size Mix in Std Fmt=On Formatting: DICOM Annotation Box=On, Req.Size Scale=On Formatting: Req.Size Mix in Row=On, Trim=On Formatting: Aspect Ratio Mix in Row=On, Image Size Mix in Row=On Formatting: Req.Image Size=On, Req.Size Mix on Page=On Formatting: True Landscape=On Formatting: Max Img per Band=20, Max Band per Page=20, Max Img Col=0 Formatting: Max Img Row=0, Min Horiz Sep=2, Min Vert Sep=2 Formatting: Trim Width Enabled=2, Trim Width Disabled=0 Formatting: Pixel Pitch=12.8205 Image processing: Grayscale=On, Minify=On, Max Image Dmax=3.1 SCU: Density Space=On, Variable Border=On, PLUT Service=On SCU: Curve Shape Tone Scaling=On, Perception LUT Tone Scaling=On M952 usage: Min H/V Mag=1, Max H/V Mag=64, Min Dmax 952=1.7

Content:	Configuration
	On configure, SCP services, select the specific modality, modify:
	➪ Image Resizing, Resizing <M/S>=Minify/Scale, Always Apply=N Relocate Text Box, Location = none N-EVENT Reporting, Reporting=N, Always Apply=Y Warning Status=Y PLUT=N Tone scaling = PL (Perception LUT), always apply = Y Curve Shape/TFT, TFT/ULUT=Wrkstn2a.w87, Always Apply=Y Contrast (dry)=1, Always Apply=N Interp. /Smoothing, Smoothing Type=0, Always Apply=N Image Dmin=0.00, Always Apply=N, Image Dmax=3.00, Always Apply=N Polarity=Normal, Always Apply=N Border=3.99, Always Apply=N Size=14INx17IN, Always Apply=N Base=Blue Film, Always Apply=N Priority=Normal, Always Apply=N Page Annotation, Annotation Setup, Always Apply=N, Modality ID=Off, Hospital Name=Off, Print Date=Off, Print Time=Off, Page Number=Off Basic Color=N
	8200 setup on CONFIGURATION menu:
	on IMAGE QUALITY-> TFT FILES menu: TFT=Ver693c0.w87
	on LOCAL PANEL menu: Contrast=1, Density=3.00
	On DICOM menu: SCU config.: AE=MIM, TFT=VER693C0, C=6, Smoothing=0 DICOM config.: AE=ANY_ANY, Port=1025

Error/warning messages (examples)

Warning or error messages of camera	Message sent by SCP (*1)	Message displayed on SCU (*2)
Camera is warming up	PRINTER INIT PROC INIT	Camera initializing Processor initializing
Camera switched off	PRINTER DOWN	Camera down
Camera is in calibration	n.a.	Nothing displayed
Supply magazine empty	SUPPLY EMPTY	Camera out of film
Film jam	FILM JAM	Film jam
Supply magazine not inserted	NO SUPPLY MGZ	Film supply not available

Warning or error messages of camera	Message sent by SCP (*1)	Message displayed on SCU (*2)
Cover or door of camera open	COVER OPEN	Camera cover, drawer or door open
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Kodak DryView 8100/PACS Link MIM 200

General information

Block diagram

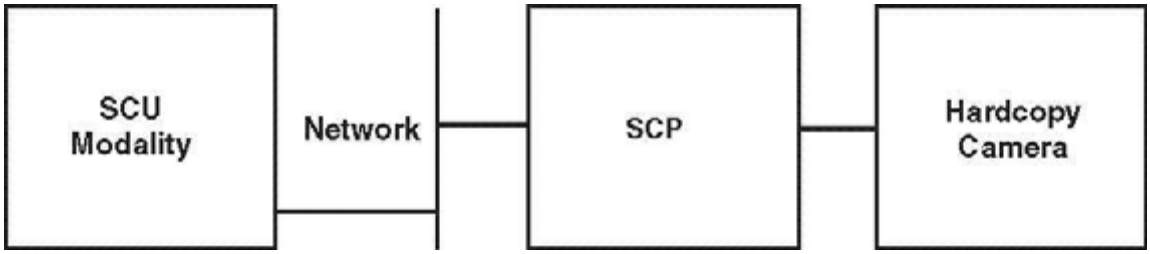

Fig. 13:

Available film sizes

Application		Status	Film type	Medium type
14" x 17"	Portrait	Yes	DVB	Blue-based
	Landscape	Yes	DVB	Blue-based
14" x 14"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
11" x 14"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
10" x 12"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
8" x 10"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
Others		N/A	N/A	N/A

Restrictions

NOTE **For HCC-independent restrictions, see (Restrictions and known effects / p. 7).**

NOTE **Minimum density command is not supported.**

NOTE **Maximum number of associations supported: 9**

NOTE	The background command does not work properly.

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	DV8100[1]	Yes
Port number	5040	No

1. Do not use an AE title such as “NER_...”

HCC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (Printer spec. file name)		kodak8100	No
DICOM node		dv8100	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density		20	Yes
Pixel size [1/1000 mm]		78.0 x 78.0	No
Film sheet formats, Portrait	Number of pixels [columns x rows]	14"x17" 4096x5216	In “define new” Do not modify/add Select only Delete only
Film sheet formats, Landscape	Number of pixels [columns x rows]	14"x17" 5216x4096	
Medium type		Blue film	Yes
Film destination		Processor	No
Color appearance		Grayscale 12 bit	No
Background		Black	Yes
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Device type:	**DICOM print server (SCP)**
Device name:	PACS Link MIM 200
Manufacturer:	Kodak
SW revision:	V 6.1
Physical interface:	IBM, x series 205
Network protocol:	TCP/IP
DICOM conformance statement:	DCM, Rev. D, Oct.17, 2003
Image memory:	192 MB
Hard disk:	4 GB
Number of inputs:	1 network card, 100/10 base T
Number of outputs:	1 copcil card
Number of operating panels:	1

Device type:	**Printer**
Device name:	DryView 8100
Manufacturer:	Kodak
SW revision:	2.4.1
Physical interface:	n.a.
Network protocol:	n.a.
DICOM conformance statement:	n.a.
Image memory:	32 MB
Hard disk:	None
Number of inputs:	1 digital image port, 1 RS422 COM port

Device type:	Printer
Number of outputs:	n.a.
Number of operating panels:	1 built-in keyboard

Printer settings

Content:	Configuration
	MIM 200 setup
	On configure, network:
	Node Name=MIM, IPAddr=accordingly Subnet Mask=accordingly, Gateway Addr=accordingly
	On configure, input, network, add:
	Protocol=DICOM 3.0, Log.Name=DICOM, Type/Com=Keypad/COM9
	On configure, destination, add, print, direct, qualified, 8100, set:

Content:	Configuration
	➪ General remarks: Log.Name=8100, General Remarks: Database Name=8100, Model=8100, Memory 32 Media info.: Media=35x43cm, 4096x5223, 5133, Blue Output params.: Cmd Set=952, Baud=1200, Data=8, Stop=1, Parity=Even Output params.: Pixel=12, Header/Line, Transfer=1000 KHz, Acq=60 Supported item: Collation=On, Text=On, Tone Scaling=On, Rotation=On Interpolation: NoMag=On, Bilin=On, Repl=On, CubicSpline=On Format types: Custom=On, Slide=On, Row Symmetric=On Format types: 1, 2, 4, 6, 8, 9, 12, 15, 16, 20, 24, 30, 35=On Formatting: Aspect Ratio Mix on Page=On, Image Size Mix in Std Fmt=On Formatting: DICOM Annotation Box=On, Req.Size Scale=On Formatting: Req.Size Mix in Row=On, Trim=On Formatting: Aspect Ratio Mix in Row=On, Image Size Mix in Row=On Formatting: Req.Image Size=On, Req.Size Mix on Page=On Formatting: True Landscape=On Formatting: Max Img per Band=20, Max Band per Page=20, Max Img Col=0 Formatting: Max Img Row=0, Min Horiz Sep=2, Min Vert Sep=2 Formatting: Trim Width Enabled=2, Trim Width Disabled=0 Formatting: Pixel Pitch=12.8205 Image processing: Grayscale=On, Minify=On, Max Image Dmax=3.1 M952 usage: Min H/V Mag=1, Max H/V Mag=64, Min Dmax 952=1.7
	On configure, SCP services, select the specific modality, modify:

Content:	Configuration
	➪ Image resizing Resizing <M/S>=Minify/Scale, Always Apply=N Relocate Text Box, Location = none N-EVENT Reporting, Reporting=N, Always Apply=Y Warning Status=Y PLUT=N Tone Scaling=PL (PerceptionLUT), Always Apply=Y Curve Shape/TFT, TFT/ULUT=Wrkstn2a.w87, Always Apply=Y Contrast (dry)=01, Always Apply=N Interp. /Smoothing, Smoothing Type=5, Always Apply=N Image Dmin=0.00, Always Apply=N, Image Dmax=3.60, Always Apply=N Polarity=Normal, Always Apply=N Border=3.99, Always Apply=N Size=14INx17IN, Always Apply=N Base=Blue Film, Always Apply=N Priority=Normal, Always Apply=N Page Annotation, Annotation Setup, Always Apply=N, Modality ID=Off, Hospital Name=Off, Print Date=Off, Print Time=Off, Page Number=Off Basic color=N
	8100 setup on CONFIGURATION menu:
	On SIB board (i.e. external switch below control plugs):
	SW1=Down
	On COMMUNICATIONS menu:
	Parity=Even, Stop=1, Data=8, 1200 baud, EOM=CR, Protocol=831/952 Mem.Full=BSY, Alarm=Old, Acquire Timeout=90, P1,,P6=0
	On IMAGE QLTY-> Mag Scaling=Off, Pixel Correct=Off, 952 Override=Off
	On IMAGE QUALITY-> TFT FILES menu: TFT=Ver693c0.w87
	on LOCAL PANEL menu: Contrast=6, Density=3.00
	on SYSTEM menu: Acquire=Digital, Max.Img.Columns=4361
	on DIGITAL menu: Pixel Depth=12, Header/Line, Parity=Even

Error/warning messages (examples)

Warning or error messages of camera	Message sent by SCP (*1)	Message displayed on SCU (*2)
Film jam	FILM JAM	Film jam
Camera is in calibration/calibration fail	PRINTER DOWN	Camera down

Warning or error messages of camera	Message sent by SCP (*1)	Message displayed on SCU (*2)
Camera is in calibration/calibration ok	Nothing displayed	Nothing displayed
Supply magazine empty	SUPPLY EMPTY	Camera out film
Supply magazine not inserted	NO SUPPLY MGZ	Film supply not available
Cover or door of camera open	COVER OPEN	Camera cover, drawer or door open
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Kodak KELP 2180/PACS Link MIM 200

General information

Block diagram

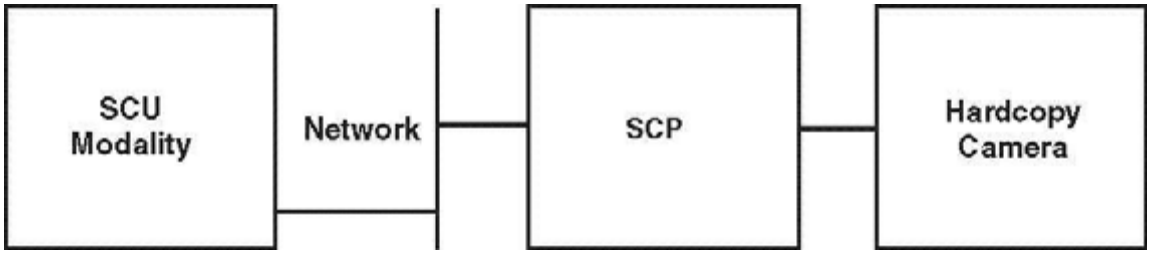

Fig. 14:

Available film sizes

Application		Status	Film type	Medium type
14" x 17"	Portrait	Yes	DHG-10	Blue-based
	Landscape	Yes	DHG-10	Blue-based
14" x 14"	Portrait	Yes	DHG-10	Blue-based
	Landscape	Yes	DHG-10	Blue-based
11" x 14"	Portrait	Yes	DHG-10	Blue-based
	Landscape	Yes	DHG-10	Blue-based
10" x 12"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
8" x 10"	Portrait	Yes	DHG-10	Blue-based
	Landscape	Yes	DHG-10	Blue-based
Others		N/A	N/A	N/A

Restrictions

NOTE

For HCC-independent restrictions, see (Restrictions and known effects / p. 7).

NOTE

Maximum number of associations supported: 9

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	K2180[1]	Yes
Port number	5040	No

1. Do not use an AE title such as “NER_...”

HCC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (printer spec. file name)		kodak2180	No
DICOM node		K2180	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density		20	Yes
Pixel size [1/1000 mm]		79.0 x 79.0	No
Film sheet formats, Portrait	Number of pixels [columns x rows]	14"x17" 4096x5156 14"x14" 4096x4132 11"x14" 3236x4132 8"x10" 2284x2836	In “define new” Do not modify/add Select only Delete only
Film sheet formats, Landscape	Number of pixels [columns x rows]	14"x17" 5156x4096 14"x14" 4132x4096 11"x14" 4132x3236 8"x10" 2836x2286	

Filming properties		Display	Changes allowed
Medium type		Blue film	Yes
Film destination		Processor	No
Color appearance		Grayscale 12 bit	No
Background		Black	Yes
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Device type:	DICOM print server (SCP)
Device name:	PACS Link MIM 200
Manufacturer:	Kodak
SW revision:	V 6.1
Physical interface:	100/10 base T Ethernet, UTP/STP
Network protocol:	TCP/IP
DICOM conformance statement:	Rev. G, Oct. 17, 2003
Image memory:	192 MB
Hard disk:	4 GB
Number of inputs:	1 Ethernet board (RJ45)
Number of outputs:	1 Ethernet board (fiber optic)
Number of operating panels:	1 keypad

Manufacturer/device type:	Printer
Device name:	KELP 2180
Manufacturer:	Kodak
SW revision:	V 2.17H
Physical type:	None

Manufacturer/device type:	Printer
Network protocol:	None
Manufacturer´s specifications:	None
Image memory:	24 MB
Hard disk:	None
Number of inputs:	1 input module (fiber optic)
Number of outputs:	n.a.
Number of operating panels:	1 built-in keypad

Printer settings

Content:	Configuration
	MIM 200 setup
	On configure, network:
	Computer Name=e.g., Kodak2180, IPAddr=accordingly Subnet Mask=accordingly, Gateway Addr=accordingly
	On configure, input, network, add:
	Protocol=DICOM 3.0, Log.Name=DICOM, Type/Com=Keypad/COM9
	On configure, destination, add, print, direct, qualified, KELP 2180, set:

Content:	Configuration
	➪ General remarks: Log.Name=KELP2180, Database Name=2180 General remarks: Model=KELP2180, Memory 24, Node ID=6 or accordingly Media info.: Media=35x43cm, 4136x5160, 5030, (Blue) Media=35x35cm, 4136x4136, 4006, (Blue) Media=11"x14", 3240x4136, 4006, (Blue) Media=8"x10", 2290x2840, 2710, (Blue) Supported item: Collation=On, Text=On, Tone Scaling=On, Rotation=On Interpolation: No Mag=On, Bil=On, Repl=On, Cubic=On, Cubic 2=On Format types: Custom=On, Slide=On, Row Symmetric=On Format types: 1, 2, 4, 6, 8, 9, 12, 15, 16, 20, 24, 30, 35=On Formatting: Aspect Ratio Mix on Page=On, Image Size Mix in Std Fmt=On Formatting: DICOM Annotation Box=On, Req.Size Scale=On Formatting: Req.Size Mix in Row=On, Trim=On Formatting: Aspect Ratio Mix in Row=On, Image Size Mix in Row=On Formatting: Req.Image Size=On, Req.Size Mix on Page=On Formatting: True Landscape=On Formatting: Max Img per Band=20, Max Band per Page=20, Max Img Col=0 Formatting: Max Img Row=0, Min Horiz Sep=2, Min Vert Sep=2 Formatting: Trim Width Enabled=2, Trim Width Disabled=2 Formatting: Pixel Pitch=12.6582 Image processing: Grayscale=On, Minify=On, Max Image Dmax=3.2 M952 usage: Min H/V Mag=0, Max H/V Mag=0, Min Dmax 952=1.7
	On configure, SCP services, select the specific modality, modify:

Content:	Configuration
	➪ Image Resizing, Resizing <M/S>=Minify/Scale, Always Apply=N Relocate Text Box, Location = none N-EVENT Reporting, Reporting=N, Always Apply=Y Warning Status=Y PLUT=N Tone Scaling=CS (Curve Shape), Always Apply=Y Curve Shape/TFT, Curve Shape=0.0, Always Apply=Y Contrast (wet)=+0, Always Apply=N Interpolation=No Mag., Always Apply=N Image Dmin=0.00, Always Apply=N, Image Dmax=3.00, Always Apply=N Polarity=Normal, Always Apply=N Border=3.99, Always Apply=N Size=14INx17IN, Always Apply=N Base=Blue Film, Always Apply=N Priority=Normal, Always Apply=N Page Annotation, Annotation Setup, Always Apply=N, Modality ID=Off, Hospital Name=Off, Print Date=Off, Print Time=Off, Page Number=Off Film output = 9 (no. of sorter), always apply = N Basic color = N
	2180 setup:
	Optical interface board will automatic configure into 2180, no setup needed

Error/warning messages (examples)

Warning or error messages of camera	Message sent by SCP (*1)	Message displayed on SCU (*2)
Supply magazine 14X17 empty	WARNING EMPTY 14X17 BLUE	14x17 blue film supply empty
Front cover open (access magazines)	WARNING PRINTER OFFLINE	Camera offline
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Codonics Horizon

General information

Block diagram

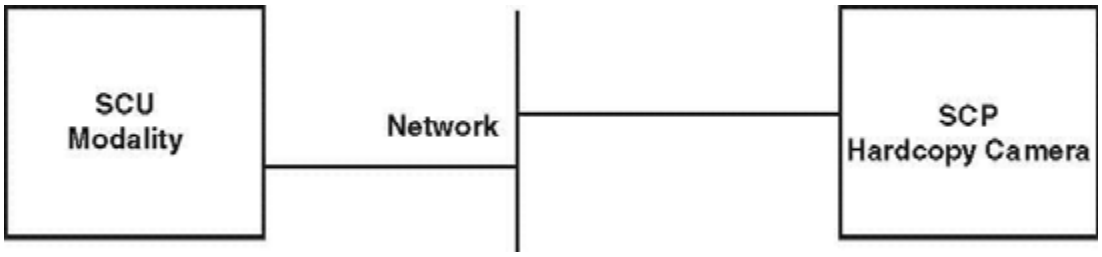

Fig. 15:

Available film sizes

Application		Status	Film type	Medium type
14" x 17"	Portrait	Yes	DirectVista	Grayscale Blue-based
	Landscape	Yes	DirectVista	Grayscale Blue-based
14" x 14"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
11" x 14"	Portrait	No[1]	No[1]	No[1]
	Landscape	No[1]	No[1]	No[1]
10" x 12"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
8" x 10"	Portrait	Yes	DirectVista	Grayscale Blue-based
	Landscape	Yes	DirectVista	Grayscale Blue-based
Others		N/A	N/A	N/A

1. Film size is available but not released

Restrictions

NOTE	**For HCC-independent restrictions, see (Restrictions and known effects / p. 7).**
NOTE	**Film size 8” x 10”, the behavior of the linear LUT is not correct.**
NOTE	**Film size 11" x 14" is not released because it is not yet available.**

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	HORIZON	Yes
Port number	104	No

HCC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (Printer spec. file name)		Codonics Horizon	No
DICOM node		Horizon	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density		20	Yes
Pixel size [1/1000 mm]		79.4 x 79.4	No

Filming properties		Display	Changes allowed
Film sheet formats, Portrait	Number of pixels [columns x rows]	14"x17" 4322x5025 11"x14" 3382x4022 8"x10" 2406x2790	In “define new” Do not modify/add Select only Delete only
Film sheet formats, Landscape	Number of pixels [columns x rows]	14x17" 5025x4322 11" x 14" 4022x3382 8" x 10" 2790x2406	
Medium type		Blue film	Yes
Film destination		Processor	Yes
Color appearance		Grayscale 12 bit	No
Background		Black	No
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Manufacturer/device type:	Printer (SCP)
Device name:	Horizon
Manufacturer:	Codonics
SW revision:	Op.-SW.1.7.0, DICOM 3.0
Physical type:	Ethernet, RJ45, UTP/STP network cable cat.5
Network protocol:	TCP/IP

Manufacturer/device type:	Printer (SCP)
DICOM conformance statement:	Document Rev. V1.70, October 27, 2003
Image memory:	256 MB RAM
Hard disk:	10 GB (8 GB for spooling)
Number of inputs:	1 Ethernet, 100/10 base T-RJ45 connector and AUI 15-pin connector
Number of outputs:	n.a.
Number of operating panels:	1 built-in panel

Printer settings

Content:		Remarks
Engine info.	Firmware version: 1.7.0 Firmware build information: v1.7.0 21:26 05/14/03 Printer serial number: n.a. Control FPGA version: 32 Engine FPGA version: 34 Sensor FPGA version: 16 Engine subassembly ID: 0 Motherboard serial number: n.a. TPH serial number: n.a. TPH scan profile version: 2 Side edge calibration version: 2 Software license code: 001-00191-066 KDU serial number: n.a. KDU version: S5.09U5.15H02 Product code: 0	This table is printed on the test film
DVFILMBLU	Saturation: -- Gamma: 1.00 Contrast: 0 Rotate: Auto Scale: Lanczos MCM: -- Dmin: 0 Dmax: 300 LUT: linear Polarity: Positive Border fill: On Background: 00/00/00 Captions: On Coverage: Standard Film view: Front Image warn.: No	This table is printed on the test film

Error/warning messages (examples)

Warning or error messages of camera	Message sent by SCP (*1)	Message displayed on SCU (*2)
Supply empty	WARNING SUPPLY EMPTY	Camera out of film
Cover open	FAILURE COVER OPEN	Camera cover, drawer or door open
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Konica DryPro 751/752

General information

Block diagram

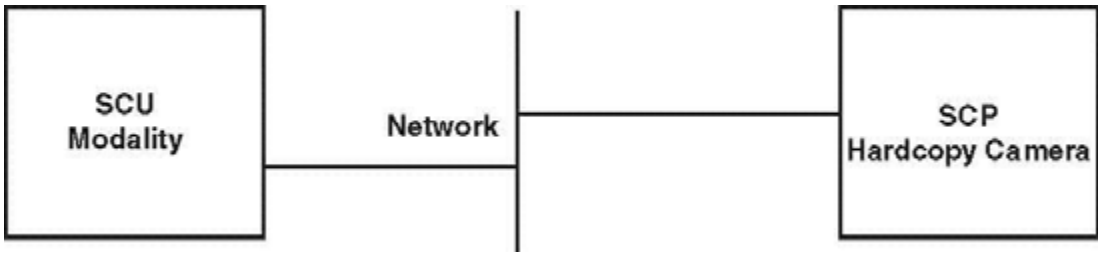

Fig. 16:

Available film sizes

Application		Status	Film type	Medium type
14" x 17"	Portrait	Yes	DRYPRO SD-P	Blue-based
	Landscape	Yes	DRYPRO SD-P	Blue-based
14" x 14"	Portrait	Yes	DRYPRO SD-P	Blue-based
	Landscape	Yes	DRYPRO SD-P	Blue-based
11" x 14"	Portrait	Yes	DRYPRO SD-P	Blue-based
	Landscape	Yes	DRYPRO SD-P	Blue-based
10" x 12"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
8" x 10"	Portrait	N/A	N/A	N/A
	Landscape	N/A	N/A	N/A
Others		N/A	N/A	N/A

Restrictions and known effects

NOTE

For HCC-independent restrictions, see (Restrictions and known effects / p. 7).

NOTE

DRYPRO 751/752 supports 3 film sizes. Minimum 1 supply tray. Changing the film size requires manual modification at the camera site.

751=1-supply Model 751 with 1-channel tray.

752=2-supply Model 752 with 2-channel tray.

Recommendation: Delete the non-installed film size (see the "SCU/modality software configuration" chapter).

SCU/modality software configuration

Application entity Properties	Display	Changes allowed
AE title	DPRO752	Yes
Port number	104	No

HCC device/ general settings		Display	Changes allowed
Type		DICOM printer	No
Class (Printer spec. file name)		konicaDryPro752	No
DICOM node		DPRO752	Yes

Filming properties		Display	Changes allowed
Hold printed film jobs		10	Yes
Min. density [0.1]		20	No
Pixel size [1/1000 mm]		80.0 x 80.0	No

Filming properties		Display	Changes allowed
Film sheet formats, Portrait	Number of pixels [columns x rows]	14"x17" 4272x5112 14" x 14" 4272x4162 11" x 14" 3336x4162	In “define new” Do not modify/add Select only Delete only
Film sheet formats, Landscape	Number of pixels [columns x rows]	14" x 17" 5224x4162 14" x 14" 4272x4162 11" x 14" 4272x3224	
Medium type		Blue film	No
Film destination		Processor	No
Color appearance		Grayscale 12 bit	No
Background		Black	Yes
Transformation		No magnification	No

NOTE

Do not modify and/or add film sizes.

Do not modify pixel sizes.

Delete film sizes that are not available at customer site.

SCP/hardcopy camera configuration (provided by OEM)

Identification

Device type:	DRY laser imager
Manufacturer/device name:	Konica/DRYPRO 751/752
SW revision:	V1.00 R07
Image memory:	256 MB (standard)
Hard disk:	20 MB (standard)
Number of operating panels:	1 LCD with touch panel
No./type of input:	1.5 DICOM PRINT IN

No./type of output:	N/A
Physical network interface:	Ethernet RJ45, 10/100 base TX
Network protocol:	TCP/IP DICOM
DICOM conformance statement:	DRYPRO model 751/752 Ver1.03 June 18, 2003

Printer settings

File name	Parameter	Content
	Maintenance print condition	LEO1
	LUT	LINEAR
	DENSITY	0
	CONTRAST	0
	SMOOTH TYPE	7
	DEFAULT TRAY	UPPER TRAY
	MAX DENSITY	300
	MIN DENSITY	020
	L0	0
	La	0
	SORTER BIN	01
	ORIENTATION	Portrait
	POLARITY	Posi
	TRIM	Off
	BORDER	Black
	FLIP	Off
STAMP SELECT	DATE TIME	No
	Copy no.	No
	Patient ID	No

File name	Parameter	Content
	SCU ID/page no.	No
	STAMP MESSAGE	NO
	STAMP DIRECTION	
	YEAR FORMAT	YY
	MONTH FORMAT	Text
	DATE FORMAT	Time + date
	DICOM PRIORITY THIS PANEL PRIORITY	SMOOTH TYPE

Maintenance
SERVICE
2/3
DICOM SCU
AXIOM Artis
SCU SETUP

File name	Parameter	Content
	SCU CH USE	ON
	SCU NAME	LEO1
	N-EVENT PORT NO	0
	IP ADDRESS	xxx.xxx.xxx.xxx
	AE-TITLE	LEONARDO
	HOST NAME	Leonardo
	SIZE TYPE CHECK	OFF
	BORDER SIZE	REGIUS
	EMPTY NOTICE	N/A
	14x17 B	ON
	14x14 B	ON
	EDGE ENHANCE	ON

File name	Parameter	Content
	FRAME LAYOUT	CENTER
	DICOM ERROR LEVEL	STANDARD
	DEFAULT Dmax/Dmin	DICOM
	Magnification	02

Error/warning messages (examples)

Warning or error messages of camera	Message sent by SCP (*1)	Message displayed on SCU (*2)
Film counter is 0 Film empty	WARNING EMPTY 14X17 BLUE	14x17 blue film supply empty
Filter tray open	FAILURE CHECK PRINTER	Check camera
(*1) See all messages in the DCS of the hardcopy camera		
(*2) See all messages in the DCS of the modality		

Image quality and optical density

No specific parameter available.

Real size scaling

N/A

Changes to previous version

Chapter	Section	Action
1	Restrictions and known effects	Updated
1	Scope of applicability	SW version updated
1	Image quality and optical density check	Updated